

The tick collection (Acarina: Ixodoidea) of the Hon. Nathaniel Charles Rothschild deposited in the Nuttall and general collections of the British Museum (Natural History)



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With a Foreword by the Hon. Miriam Rothschild

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Synopsis

The Hon. N. C. Rothschild achieved worldwide fame for his study of the Siphonaptera. During the early part of this century he also made a significant collection of ticks which he gave to Professor George H. F. Nuttall at Cambridge University. Upon Nuttall's death, the collection was given to the British Museum (Natural History) and is kept as a separate entity.



Male *Ixodes uriae* White, 1852. (Ixodoidea: Ixodidae). A tick with a circumpolar distribution in both the northern and southern hemispheres. It is ectoparasitic on a variety of seabirds and to date, twenty different arboviruses have been recovered from this species.

In addition, Rothschild on numerous occasions between 1911 and 1923 deposited ticks in the British Museum (Natural History). Herewith are recorded the 197 tick collections of the Hon. N. C. Rothschild plus one of the Hon. Walter Rothschild deposited in the Nuttall collection and the 156 collections in the general collection of the British Museum (Natural History).

Foreword

In 1913 N. C. Rothschild presented his collection of 'Siphonaptera and other parasitic insects' to the British Museum (Natural History). One of the conditions attached to the gift read as follows: 'The Trustees shall so soon as the said collection comes into their hands or is placed under their control and as soon as the funds placed at their disposal by Parliament will allow cause to be made and published a catalogue giving the names and full number of specimens of each species of parasitic insect contained in the said collection.'

Over 60 years has now elapsed since the collection was accepted, but the catalogue has not yet been completed. Although ticks are arthropods, they are not insects, but this group of animals, along with a number of mites, was included in the collection.

During my period of Trusteeship of the British Museum (Natural History) I had the opportunity of discussing this problem with Harry Hoogstraal, and he suggested that James Keirans might undertake to catalogue the Rothschild ticks. To my great delight he agreed to do this, although the task proved more time-consuming than we had at first anticipated. This was because the Rothschild Collection had not been preserved as a single unit, and the ticks, along with the Nycteribiidae, Cimicidae, Hippoboscidae and other smaller groups, had been distributed in the general collection and, in addition, had not all received Museum accession numbers.

Although these circumstances added enormously to James Keirans' labours, they made the compilation of this Catalogue even more necessary and valuable. Until those who are engaged in ecological and medical research come to use museum material such as this, no one can really appreciate the immense boon of well-catalogued individual collections.

Since, between 1900 and 1910, N. C. Rothschild had given Professor Nuttall the bulk of his tick material*, it was considered more appropriate to merge the two catalogues into one, and the manuscript was therefore divided into two parts: I, the specimens collected by Rothschild, now in the Nuttall collection; and II, the specimens donated by Rothschild to the British Museum (Natural History). The ticks in the general collection have been added—a course we followed when cataloguing the fleas (G. H. E. Hopkins & M. Rothschild, Vols. I–V, 1953–1971) and the Nycteribiidae (Oscar Theodor, 1967).

It will be noted that Walter Rothschild contributed one specimen to this collection. It has not usually been appreciated that N. C. Rothschild's brother also added considerably to the flea material, although he did not describe any species himself. The N. C. Rothschild donations of Nycteribiidae to the British Museum contained 56 undescribed species, and the Ixodoidea collections 10. The two brothers and their collaborators described over 5000 new species, but they probably collected twice that number of animals new to science.

James Keirans has added greatly to the value of this compilation by providing information concerning the viruses and in certain cases rickettsiae of which the Rothschild ticks are known vectors.

The illustration depicts a male specimen of *Ixodes uriae* White, one of the most spectacular species, adorned with a handsome fringe along the posterior margin, which has the dubious distinction of carrying at least 20 known viruses in five different serogroups.

*After the sudden death of Professor Nuttall in December 1937 his collection was presented to the British Museum (Natural History) by the Molteno Institute. In accordance with the terms of the gift this collection is maintained as a discrete entity.

Altogether the meticulous care and accuracy with which James Keirans has completed this catalogue is beyond praise.

Miriam Rothschild

Introduction

Early in the twentieth century, Nathaniel Charles Rothschild acquired a large tick collection, primarily from collectors who, knowing of his great interest in fleas, would send him not only that group but also other ectoparasites including flies, bugs, and ticks.

He deposited his tick collection in two institutions; the Molteno Institute for Research in Parasitology, Cambridge University, where Professor G. H. F. Nuttall made the original determinations of all tick material, and the British Museum (Natural History), where Mr A. S. Hirst made the tick determinations. As mentioned earlier, the Nuttall collection is now at the BM(NH).

Because the Nuttall collection is kept as a discrete entity, separate from but housed with the BM(NH) collection, parts of Rothschild's tick collection are in each of the above collections. This catalogue is also divided into two sections: Part I, Rothschild tick donations to the Nuttall collection; Part II, Rothschild tick donations to the BM(NH).

The systems for numbering tick collections are different for the two sections. In Part I, the number used is that given by Professor Nuttall to a collection. The first entry is N (Nuttall) 72 followed by N73, N74, etc., in ascending sequence, first for existing specimens, then for specimens which are now missing. Each Nuttall number is followed by a Rothschild collection number or the word 'None' if the collection received no Rothschild number. A Nuttall number refers to a handwritten entry in Professor Nuttall's tick catalogue, which is now kept in the Arachnida and Myriapoda Section of the BM(NH). The locality and host data are cited in their modern forms, but where these could not be established Nuttall's own entries are quoted.

One additional point should be made relating to the Nuttall collection forming Part I. Nathaniel C. Rothschild donated all specimens recorded in Part I with the single exception of N888 which was donated by his brother, the Hon. Walter Rothschild, to the Entomological Research Committee and subsequently to Professor Nuttall.

Collections in Part II are entered alphabetically by genus, first Argasidae, then Ixodidae. All information is presented as in Part I with the exception that replacing a Nuttall and Rothschild number will be a British Museum (Natural History) registration number. Where no registration number was given to a collection, the word 'None' will appear. I have given each collection a set of Keirans numbers, K1-K156. These numbers, along with the Nuttall numbers from Part I, will allow the reader to use the tick species, locality, and host lists and refer back to individual collections within Parts I and II.

Throughout the text, citations are given to publications which mention a particular taxon. My comments are presented within square brackets []; those comments by Nuttall or some other investigator are cited within square brackets enclosed by quotation marks '[]'.

PART I

Rothschild specimens donated to the Nuttall collection

Species of Ixodoidea represented in the Nuttall collection, British Museum
(Natural History), donated by the Hon. N. C. Rothschild

Nuttall numbers follow each species. Numbers in parentheses refer to missing collections. Thus, validity of original determinations is unverified.

ARGASIDAE

Argas boueti Robaud and Colas-Belcour 1164

Argas persicus (Oken) 589, 590, (3536)

Argas reflexus (Fabricius) (3159)

Argas vespertilionis (Latreille) 591, 592, 593,
1151, 1152, 1153, 1163

Argas sp. 1154, (1388)

Ornithodoros capensis Neumann group 594

Ornithodoros moubata (Murray) 595

Otobius megnini (Dugès) (596)

IXODIDAE

Amblyomma albolimbatum Neumann (78), 567,
569

Amblyomma australiense Neumann 547

Amblyomma cajennense (Fabricius) 557, 648,

Amblyomma clypeolatum Neumann (75)

Amblyomma compressum Macalister 564

Amblyomma cyprium Neumann 73, 565

Amblyomma decoratum C. L. Koch (93)

Amblyomma dissimile C. L. Koch 568

Amblyomma gemma Dönitz 558b

Amblyomma geoemydae (Cantor) 545

Amblyomma hirtum Neumann (397)

Amblyomma longirostre (C. L. Koch) 560

Amblyomma marmoreum C. L. Koch (77), 570

Amblyomma ovale C. L. Koch 562, 566

Amblyomma pecarium Dunn 557

Amblyomma tholloni Neumann 559

Amblyomma triguttatum C. L. Koch 546, (551),
552, 553

Amblyomma varium C. L. Koch (3351)

Amblyomma sp. 74, (76), (544), 633, 1166, 1386,
1391, 1392, 1393, 1394, 1396, 1397

Aponomma decorosum (L. Koch) 550

Aponomma gervaisi (Lucas) (92), (548)

Aponomma gervaisi var. *lucasi* (Warburton) (90),
(91)

Aponomma hydrosauri (Denny) 556

Aponomma varanensis (Supino) 554

Aponomma sp. (571), 3138

Boophilus decoloratus (C. L. Koch) (3157)

Boophilus microplus (G. Canestrini) 588

Dermacentor albipictus (Packard) 666, 1105,
1497, 1498, 1499, 1500, 1501, 1502, 1503

Dermacentor andersoni Stiles 1387, 1390, 3502

Dermacentor reticulatus (Fabricius) 3160

Dermacentor rhinocerinus (Denny) 555, 563

Dermacentor sp. 3330

Haemaphysalis bispinosa Neumann 574, 582,
583, 892

Haemaphysalis campanulata Warburton 579

Haemaphysalis celebensis Hoogstraal, Trapido
and Kohls 72

Haemaphysalis elongata Neumann 670

Haemaphysalis erinacei Pavesi 3537, 3538, 3539

Haemaphysalis humerosa Warburton and Nuttall
669

Haemaphysalis hystricis Supino 572, 573, 575,
576

Haemaphysalis indica Warburton 575x

Haemaphysalis leachi (Audouin) (539), 577, 578

Haemaphysalis punctata G. Canestrini and
Fanzago 580

Haemaphysalis tiptoni Hoogstraal 670

Haemaphysalis sp. 581

Hyalomma aegyptium (Linnaeus) 549, 561

Hyalomma rufipes C. L. Koch 558a, 888 (W.
Rothschild)

Hyalomma syriacum C. L. Koch (3139), (3140),
(3141)

Hyalomma truncatum C. L. Koch 1167

Hyalomma sp. 1398, (3136)

Ixodes australiensis Neumann 645, 646

Ixodes boliviensis Neumann 637

Ixodes brunneus C. L. Koch (396)

Ixodes cookei Packard 1504

Ixodes fecialis Warburton and Nuttall 650, 1211,
1213

Ixodes frontalis (Panzer) 523

Ixodes hexagonus Leach (216), (217), (298),
(322), (324), 597, 598, 599, 600, 601, 602, 603,
604, 606, 607, 608, 609, 610, 611, 612, 613,
(674), (746), 1067, 1159, 1160

Ixodes holocyclus Neumann 643, (644), 1212

Ixodes lividus C. L. Koch 605, 1068

- Ixodes loricatus* Neumann 638, 639, 640, 641
Ixodes luciae Senevet 647
Ixodes nitens Neumann 360
Ixodes putus (O. Pickard-Cambridge) (516), (517), (518)
Ixodes ricinus (Linnaeus) (509), (628), (629), (630), (631), (632), (656)
Ixodes rothschildi Nuttall and Warburton 634
Ixodes rubidus Neumann 826
Ixodes scapularis Say 626
Ixodes texanus Banks 1399
Ixodes trianguliceps Birula 619, (620), 621, 622, 623, 624, 625, 1069, 1161
Ixodes unicavatus Neumann (395), 652, 667
Ixodes uriae White 617, 618
Ixodes vespertilionis C. L. Koch 649
Ixodes vestitus Neumann 642
Ixodes sp. 1066, 1162, 1167, 1389
Rhipicephalus evertsi Neumann (3157)
Rhipicephalus haemaphysaloides Supino 584, (3158)
Rhipicephalus muehlensii Zumpt 585
Rhipicephalus sanguineus (Latreille) (586), (587)
Rhipicephalus sp. 1395

Rothschild specimens in the Nuttall collection with type status

NUTTALL ROTHSCHILD

No.	No.	
72	916	<i>Haemaphysalis celebensis</i> Hoogstraal, Trapido, and Kohls, 1965. <i>J. Parasit.</i> 51 : 1001, figs. 1–9.
360	None	<i>Ixodes nitens</i> Neumann, 1904. <i>Archs. Parasit.</i> 8 : 459.
565	243	<i>Amblyomma quasicyprium</i> Robinson, 1926. <i>Ticks. A Monograph of the Ixodoidea</i> Pt. 4: 237, fig. 117.
634	159	<i>Ixodes percavatus rothschildi</i> Nuttall and Warburton, 1911. <i>Ticks. A Monograph of the Ixodoidea</i> Pt. 2: 221.
647	248	<i>Ixodes loricatus spinosus</i> Nuttall, 1910. <i>Parasitology, Cambridge</i> 3 : 411, fig. 5.
650	203	<i>Ixodes fecialis</i> Warburton and Nuttall, 1909. <i>Parasitology, Cambridge</i> 2 : 58, figs. 1–2.
669	178	<i>Haemaphysalis humerosa</i> Warburton and Nuttall, 1909. <i>Parasitology, Cambridge</i> 2 : 60, figs. 4–5.

Rothschild specimens in the Nuttall collection

N72 R916

1 ♀ *Haemaphysalis hystricis* (*Haemaphysalis celebensis* HOLOTYPE)

ex. *Sus celebensis* (*Sus verrucosus celebensis*)

Celebes. No date (Sulawesi 02°00'S, 121°00'E, Indonesia)

Presented as mounted specimen No. 916 which we unmounted 4.I.1915, C. W. [Cecil Warburton] det. 8.I.1915.

Publications: Nuttall & Warburton (1915: 425, 426); Hoogstraal *et al.* (1965b: 1001); Hoogstraal *et al.* (1973: 556).

N73 R915

1 ♂ *Amblyomma caelaturum* [This species epithet crossed out and *cyprium* inserted] (*Amblyomma cyprium*)

ex. *Sus celebensis* (*Sus verrucosus* subsp.)

Celebes. No date (Sulawesi 02°00'S, 121°00'E, Indonesia)

Presented as slide No. 915 which was unmounted, being defective 5.I.1915.

3 ♂ *Amblyomma cyprium* mounted as slides, 2 transparent, 1 opaque—see slides No. 73 (i) (ii) (iii) (Nos. 917, 919, 920) (3 slides) (L. E. Robinson det. 26.I.1915) redet. 26.III.1919.

Note: The 3 slide-mounted males were missing from the Nuttall collection in 1977.

Publication: Robinson (1926: 236).

N74 R918

1 N *Amblyomma* (? *caelaturum* Cooper & Robinson) (*Amblyomma* sp.). Unmounted

- from slide labelled as off *Sus celebensis* (*Sus verrucosus* subsp.)
Celebes. No date (Sulawesi 02°00'S, 121°00'E, Indonesia
(L. E. Robinson det. 26.I.1915).
- N360 None
1 ♀ *Ixodes nitens* COTYPE (*Ixodes nitens* SYNTYPE)
ex. *Mus macleari* (*Rattus macleari*)
Christmas Island, Pacific Ocean (10°39'S, 105°40'E)
(ex. Shipley coll. No. 2)
Publications: Neumann (1904: 460); Nuttall & Warburton (1911: 185).
- N523 None
1 ♀ *Ixodes brunneus* (minus hypostome, digits) (*Ixodes frontalis*)
ex. *Passer montanus*
Saint-Genies-de Malgoires (43°57'N, 04°13'E), Gard, France
16.XI.1908 Albert Hugues
Publication: Nuttall & Warburton (1911: 192).
- N545 R258
Amblyomma sp. [sex/stage not given] (1 ♀ *Amblyomma geoemydae*) (tentative determination)
Found on ground at Paquil, Luzon, Philippine Islands (locality not verified)
15.I.1895 A. Everett
Publication: Robinson (1926: 48) recorded this as *A. americanum*.
- N546 R174
Amblyomma triguttatum [sex/stage not given] (4 ♀ *Amblyomma triguttatum*)
ex. kangaroo
Barrow Island (20°48'S, 115°23'E), N. W. Australia
XI.1900 C. J. T. Tanney. det. L. E. Robinson
Publication: Robinson (1926: 57) indicated ♂'s present but not in Nuttall collection in 1977.
- N547 R274
6 ♂, 1 ♀ *Amblyomma australiense*
ex. *Echidna aculeata* (*Tachyglossus aculeatus*)
Mt Anderson (17°58'S, 124°04'E), W. Australia
[No date] C. J. T. Tanney
Publications: Robinson (1926: 135, 136) illustrated ♂ and ♀ from this lot. Taylor (1946: 100) repeated Robinson's descriptions and illustrations.
- N549 R254
Hyalomma syriacum [sex/stage not given] (4 ♂ *Hyalomma aegyptium*)
ex. tortoise
No data
Note: An additional 1 ♂, 1 ♀ of this collection sent to New York National Museum, New York City, 18.IV.1913.
- N550 R196
Aponomma decorosum [sex/stage not given] (2 ♂ *Aponomma decorosum*)
ex. Australian monitor
Note: *A. decorosum* is found only in Australia and ranges from Queensland south to Victoria.
- N552 R179
Amblyomma triguttatum [sex/stage not given] (2 ♂, 3 ♀ *Amblyomma triguttatum*)
ex. kangaroo
Barrow Island (20°48'S, 115°23'E), N. W. Australia
20.XI.1900 C. J. T. Tanney
Publication: Robinson (1926: 57).
- N553 R211
Amblyomma triguttatum [sex/stage not given] (4 ♀, 13 N *Amblyomma triguttatum*)
ex. kangaroo
Barrow Island (20°48'S, 115°23'E), N. W. Australia
18.XI.1900 C. J. T. Tanney
Publication: Robinson (1926: 57).
- N554 R236
Aponomma exornatum [sex/stage not given] (2 ♂ *Aponomma varanensis*)
ex. *Monitor strix* [name not verified]
? Australia
Note: Collection probably not from Australia. The only collection of *A. varanensis* from Australia is the type ♂ of *A. quadratus* (an inornate form of *A. varanensis*). This single record may have been an accidental importation of tick and host.
- N555 R259
Dermacentor rhinocerotis [sex/stage not given] (7 ♂ *Dermacentor rhinocerotinus*)
No other data
Note: There is an additional ♂ of this species mounted on a slide.
- N556 R287
Aponomma hydrosauri [sex/stage not given] (2 ♂, 1 ♀ *Aponomma hydrosauri*)
? Adelaide (34°55'S, 138°35'E), W. Australia
- N557 R198
Amblyomma cajennense [sex/stage not given] (1 ♂, 2 ♀ *Amblyomma cajennense*; 3 ♂ *Amblyomma pecarium*)
ex. peccary *Tayassu* sp.
Santa Andrea, Tabasco
30.V.? '[No particulars]'
Note: The above locality information was taken from the vial label. It should be San Andrés, Estado de Tabasco (18°00'N, 92°40'W), Mexico.

Publication: Robinson (1926: 53) incorrectly gave the Nuttall number as 577.

Amblyomma cajennense is a vector of Wad Medani virus and the rickettsia of Rocky Mountain spotted fever.

N558a R263

1 ♂, 1 ♀ *Hyalomma aegyptium* (*Hyalomma rufipes*)

ex. giraffe, *Giraffa camelopardalis*

No other data

Hyalomma rufipes is the vector of the viruses Dugbe, Tete, Matruh, and Crimean Congo hemorrhagic fever.

N558b R263

2 ♂ *Amblyomma gemma*

ex. giraffe, *Giraffa camelopardalis*

No other data.

Amblyomma gemma is a vector of Nairobi sheep disease virus.

N559 R285

1 ♀ *Amblyomma tholloni*

No host

Mt Ruwenzori (00°23'N, 29°54'E), on the Uganda-Zaire border, Africa 1906 A. F. R. Wollaston

N560 R260

1 ♂ *Amblyomma longirostre*

ex. *Coendou simonsi* (*Coendou bicolor simonsi*)

Charapaya (17°22'S, 66°45'W), Bolivia

22.VI.1901 P. O. Simons

Publication: Robinson (1926: 140).

N561 None

Hyalomma syriacum [sex/stage not given] (4 ♂ *Hyalomma aegyptium*)

ex. Algerian tortoise

N. C. Rothschild

N562 R261

Amblyomma ovale [sex/stage not given] (2 ♂ *Amblyomma ovale*)

ex. *Speothas venaticus*

Charapaya (17°22'S, 66°45'W), Bolivia

27.VI.1901 P. O. Simons

N563 R266

10 ♂ '[small and large]' *Dermacentor rhinocerotis* (7 ♂ *Dermacentor rhinocerinus*)

ex. rhinoceros

No other data

Note: Nuttall, in his notebook containing information on ticks sent to various individuals and institutions, indicated that this collection was from Nyasaland, British Central Africa [Malawi] in 1907. One additional ♂ of this collection was sent to Dr J. G. Parham, Marromeu, Zembezia, Portuguese East Africa [People's Republic of Mozambique], 18.IV.1913 and one additional ♂

was sent to New York National Museum, New York City, 18.IV.1913.

N564 R218

Amblyomma badium [The species epithet crossed out and *sublaeve* inserted] (6 ♂ *Amblyomma compressum*)

ex. white-bellied pangolin, *Manis tricuspis*

No other data

L. E. Robinson det. 1926

N565 R243

1 ♀ *Amblyomma quasicyprium* Robinson, 1926
TYPE (*Amblyomma cyprium*)

ex. Spider monkey *Ateles melanochroeris* [This species epithet is crossed out and *melanochir* inserted] (*Ateles g. geoffroyi*)

Frontera, (18°32'N, 92°38'W), Tabasco, Mexico

Notes: Both host and locality are incorrect for *Amblyomma cyprium* although this ♀ appears to be true *A. cyprium*.

Nuttall 575 and 3330 also bear Rothschild number R243.

Publications: Robinson (1926: 237, 238) incorrectly gave the Nuttall number 564 for this collection. Taylor (1946: 116) repeated Robinson's error for the Nuttall number.

N566 R270

1 ♀ *Amblyomma ovale*

ex. *Speothas venaticus*

Charapaya (17°22'S, 66°45'W), Bolivia

Publication: Robinson (1926: 29) gave the date as 1900 and indicated that the collection contained only males.

N567 R282

Amblyomma albolimbatum [sex/stage not given]
(2 ♂, 1 ♀ *Amblyomma albolimbatum*)

ex. *Morelia variegata* (*Morelia spilotes variegata*)

Perth (31°56'S, 115°50'E), W. Australia.

Woodward

L. E. Robinson det. 1926

N568 R231

Amblyomma [species epithet *integrum* crossed out and *dissimile* inserted]: [sex/stage not given]
(7 ♂, 2 ♀, 7 N *Amblyomma dissimile*)

ex. large snake

Probably Frontera (18°32'N, 92°38'W), Tabasco, Mexico

May 1. I.V.1901 [The full date is on vial label but not in catalogue]

Publication: Robinson (1926: 167) indicated the date for this collection was V.1900 and that only one female was present.

N569 R267

Amblyomma moreliae [sex/stage not given] [This species epithet crossed out and *albolimbatum* inserted] (1 ♀ *Amblyomma albolimbatum*)

ex. *Diemenia superciliosa* (*Diemenia textilis*)
Herdman's Lake, near Perth (31°56'S, 115°15'E),
W. Australia

Det. Neumann & Warburton

Publication: Robinson (1926: 226) figured this ♂; on p. 227 he incorrectly gave the collection number as N1569.

N570 R182

2 ♂ *Amblyomma marmoreum*

leopard tortoise

[Africa]

No other data

L. E. Robinson det.

Note from Mr. Robinson 17.XI.1922: 'They originally showed the characteristic ornamentation, sufficient of which is still visible, especially if examined under alcohol, to leave no doubt. The coarse punctations are larger than those seen in specimens off Rhinoceros in East Africa, and the dark ornamentation is more salient, but I do not consider these differences to be of specific importance. The other morphological characters are typical.'

N572 R288

Haemaphysalis hystricis [sex/stage not given] (3 ♀
Haemaphysalis hystricis)

ex. *Canis familiaris*

Lhassia, Assam, India (coordinates for Assam—
26°00'N, 93°00'E)

1907. R. A. Lorrain

Note: Nuttall sent 1 ♂, 1 ♀ of this collection to Dr L. O. Howard of the U.S. Department of Agriculture. These specimens are now deposited in the Rocky Mountain Laboratory collection (RML 109001).

Publications: Nuttall & Warburton (1915: 425); Hoogstraal *et al.* (1965a: 476) gave combined collection data from Nuttall 572 and 573.

N573 R293

Haemaphysalis hystricis [sex/stage not given] (2 ♀
Haemaphysalis hystricis)

ex. *Canis familiaris*

Lhassia, Assam, India (coordinates for Assam—
26°00'N, 93°00'E)

1907. R. A. Lorrain

Publication: Hoogstraal *et al.* (1965a: 476) gave combined data from Nuttall 572 and 573.

N574 R294C

Haemaphysalis bispinosa [sex/stage not given]
(10 ♂, 6 ♀, 1 N *Haemaphysalis bispinosa*)

No other data

Haemaphysalis bispinosa is a vector of Kyasanur forest disease virus.

N575 R243

♀ *Haemaphysalis hystricis* (2 ♀ *Haemaphysalis hystricis*)

Note: Nuttall 565 and 3330 also bear Rothschild number R243.

N575x R163

Haemaphysalis leachi? [sex/stage not given] (1 ♂
Haemaphysalis indica)

ex. *Hyaena crocuta* (*Hyaena hyaena*)

Darje (locality not verified)

(Exp. Erlanger Hilgert)

Note: The Nuttall number for this collection is 575x in his catalogue but 575a on the vial label. Nuttall 1395 also bears Rothschild number R163.

N576 R294a

Haemaphysalis hystricis [sex/stage not given] (1 ♀,
1 N *Haemaphysalis hystricis*)

ex. *Canis familiaris*

Lushai Hills (23°10'N, 92°50'E), Assam, India

1907. R. A. Lorrain

Publications: Nuttall & Warburton (1915: 425) indicated that N576 was composed of 1 ♂, 3 ♀. Hoogstraal *et al.* (1965a: 476) saw the ♀ labeled N576ii. The nymph, in a separate vial bears the label N576i.

N577 R294

Haemaphysalis leachi [sex/stage not given] (1 ♂, 1
♀ *Haemaphysalis leachi*)

ex. *Ictonyx capensis* (*Ictonyx striatus*)

Bulawayo (20°09'S, 28°35'E), Zimbabwe

3.IV.1907 E. C. Chubb

Notes: The genus *Ictonyx* is also known in the literature as *Zorilla*. I. Geoffroy, 1826.

Nuttall 595 also bears Rothschild number R294.

Publication: Nuttall & Warburton (1915: 471).

N578 R154

Haemaphysalis leachi (?) (not long enough)
[sex/stage not given] (2 ♂, 1 ♀ *Haemaphysalis leachi*)

Deelfontein (20°17'S, 32°38'E), Zimbabwe

1.IV.1902 C. J. B. Grant

Publication: Nuttall & Warburton (1915: 472) indicated the genus as *Suricata*. However, the collection locality appears to be out of the known range of the meerkat.

N579 R212

Haemaphysalis campanulata [sex/stage not
given] (2 ♂, 1 ♀ *Haemaphysalis campanulata*)

ex. *Canis familiaris*

Yokohama (35°26'N, 139°37'E), Japan

24.IV.1902 Allan Owston

Note: Nuttall 609 also bears the Rothschild number R212 but the data do not correspond to N579.

Publication: Nuttall & Warburton (1915: 472) indicated the collection contained 2 ♂, 2 ♀ from a dog.

N580 R160

1 ♂ 1 ♀ *Haemaphysalis punctata*

[no host data]

Cambridge (52°13'N, 00°08'E), England

A. E. Shipley (Nuttall det.)

Haemaphysalis punctata is a vector of the viruses Bhanja, tickborne encephalitis, Crimean Congo hemorrhagic fever, and perhaps Tribec.

N581 R183

1 N *Haemaphysalis spinulosa*? [The species epithet crossed out and sp. inserted] (Probably *H. leachi* var. *indica*) (1 N *Haemaphysalis* sp.) (Bad condition, very queer. C. Warburton)

ex. flying squirrel

Bunguran (possibly Bungura 26°20'N, 84°05'E), India

N582 R284

Haemaphysalis bispinosa [sex/stage not given] (2 ♀ *Haemaphysalis bispinosa*)

ex. *Equus caballus*

Lushai Hills (23°10'N, 92°50'E), Assam, India

26.VI.1907 R. A. Lorrain

Publication: Nuttall & Warburton (1915: 431).

N583 R291

Haemaphysalis bispinosa [sex/stage not given] (1 ♂, 1 ♀ *Haemaphysalis bispinosa*)

ex. *Talpa* sp.

Lushai Hills (23°10'N, 92°50'E), Assam, India

1907 R. A. Lorrain

Publication: Nuttall & Warburton (1915: 431).

N584 R294b

Rhipicephalus haemaphysaloides [sex/stage not given] (3 ♂, 1 ♀ *Rhipicephalus haemaphysaloides*)

No data

N585 R242

Rhipicephalus appendiculatus [sex/stage not given] (2 ♂ *Rhipicephalus muelhensi*)

No data

N588 R255

Boophilus sp. incert. [sex/stage not given] (10 ♀ *Boophilus microplus*)

No host data

Entre-Rios, Argentina. Probably—Provincia de Entra Rios (32°00'S, 59°00'W), Argentina. (There are also two small populated areas with the name Entra Rios at 23°18'S, 64°11'W and 28°50'S, 64°11'W, which could be the collection locality.)

IV.1897 Dr C. Berg [C. Warburton det. 1918]

Note: This collection also contained 1 ♂ of the human sucking louse *Pediculus humanus*.

Boophilus microplus is a vector of the viruses Wad Medani, Seletar, and Crimean Congo hemorrhagic fever.

N589 R290

Argas persicus [sex/stage not given] (9 ♂, 6 ♀, 5 N *Argas persicus*)

No history

N590 R292

Argas persicus [sex/stage not given] (11 ♂, 4 ♀, 11 N *Argas persicus*)

No history

Note: An additional 1 ♂, 1 ♀ of this collection were presented to J. de Meza of Zomba, Malawi, 19.II.1916.

N591 R214

16L *Argas vespertilionis*

ex. bat (also parasites off mouse)

No particulars

N592 R195

3L *Argas vespertilionis* (& *Nycteribia*)

ex. *Scot'us wroughtoni* (*Scotophilus temmincki wroughtoni*)

Helwak (17°22'N, 73°44'E), Maharashtra, India.

N593 R224

Argas vespertilionis [sex/stage not given] (3 L *Argas vespertilionis*)

ex. *Vesperugo pipistrellus* (*Pipistrellus pipistrellus*)

Puttenham (51°49'N, 00°44'W), England

28.VII.1899

N594 R240

Ornithodoros talaje [sex/stage not given] (14 N *Ornithodoros capensis* group)

ex. nestlings

Arrows Sand? Puhekiox, Hawaii (locality not verified)

30.VI.1900 H. W. Henshaw

N597 R153

Ixodes hexagonus [sex/stage not given] (8 N 1 L, *Ixodes hexagonus*)

ex. *Erinaceus europaeus*

Belgium. E. A. Boulenger

Publication: Nuttall & Warburton (1911: 183).

Ixodes hexagonus is a vector of tickborne encephalitis virus.

N598 R206

Ixodes hexagonus [sex/stage not given] (1 ♀, 6 N *Ixodes hexagonus*)

ex. otter (*Lutra vulgaris*) (*Lutra lutra*)

No particulars

Publication: Nuttall & Warburton (1911: 182) indicated that the locality was England.

N599 R209

Ixodes hexagonus [sex/stage not given] (3 ♀, 4 N *Ixodes hexagonus*)

ex. *Erinaceus europaeus*

Cambridge (52°13'N, 00°08'E), England

Publication: Nuttall & Warburton (1911: 182).

N600 R221

Ixodes hexagonus [sex/stage not given] (3 ♀, 1 L*Ixodes hexagonus*)ex. polecat *Mustela putorius*

Boxworth (52°16'N, 00°02'W), England

30.IV.1901

Publication: Nuttall & Warburton (1911: 182).

N601 R208

Ixodes hexagonus [sex/stage not given] (1 ♀, 41 L*Ixodes hexagonus*)ex. otter (*Lutra vulgaris*) (*Lutra lutra*)

No other data

Note: One larva (RML 16476) of this collection was donated to the Rocky Mountain Laboratory by P. A. Buxton, London School of Hygiene and Tropical Medicine, in 1940. (See also Nuttall 1159).

Publication: Nuttall & Warburton (1911: 182) indicated that the locality was England.

N602 R222

1 ♀ *Ixodes hexagonus*ex. *Mustela erminea*

Tring (51°48'N, 00°40'W), England

19.V.1903

Publication: Nuttall & Warburton (1911: 182).

N603 R179a

Ixodes hexagonus [sex/stage not given] (2 ♀, 1 N*Ixodes hexagonus*)ex. *Mustela erminea*

Wigginton (51°47'N, 00°38'W), England

4.V.1903 Barrett coll.

Publication: Nuttall & Warburton (1911: 182).

N604 R143

Ixodes hexagonus [sex/stage not given] (4 N*Ixodes hexagonus*)ex. *Mustela vulgaris* (*Mustela nivalis*)

Tring (51°48'N, 00°40'W), England

20.III.1902.

Publication: Nuttall & Warburton (1911: 182).

N605 R164

Ixodes hexagonus [sex/stage not given] (3 ♀*Ixodes lividus*)ex. *Cotile riparia* (*Riparia riparia*)

Worsborough Bridge (53°32'N, 01°28'W), England

6.VII.1906 A. Whitaker coll.

Publication: Arthur (1963: 92)

Ixodes lividus is a vector of tickborne encephalitis virus.

N606 R225

♂'s, ♀'s, & larvae *Ixodes hexagonus* (3 ♀, 6 N, 8 L*Ixodes hexagonus*)ex. polecat (*Mustela putorius*)

Aberystwyth (52°25'N, 04°05'W), Wales

26.XI.1902.

Publication: Nuttall & Warburton (1911: 183) gave the date as 1902.

N607 R201

Ixodes hexagonus [sex/stage not given] (1 N, 7 L*Ixodes hexagonus*)ex. *Mustela erminea*

Tring (51°48'N, 00°40'W), England

3.IX.1902

Publication: Nuttall & Warburton (1911: 182) indicated that the collection was composed only of nymphs.

N608 R215

Ixodes hexagonus [sex/stage not given] (4 N*Ixodes hexagonus*)ex. *Erinaceus europaeus*

Durnberg (48°13'N, 11°55'E), Federal Republic of Germany

3.IX.1898

Publication: Nuttall & Warburton (1911: 183) gave the spelling as Dernberg rather than the catalogue spelling of Dermberg.

N609 R212

1 N *Ixodes hexagonus*ex. polecat (*Mustela putorius*)

Aberystwyth (52°25'N, 04°05'W), Wales

23.XII.1902

Note: Nuttall 579 also bears the Rothschild number R212 but the data do not correspond to N609.

Publication: Nuttall & Warburton (1911: 183) indicated that more than one nymph was in this collection.

N610 R219

N's, larvae *Ixodes hexagonus* (1 N, 15 L *Ixodes hexagonus*)ex. *Mustela erminea*

Tring (51°48'N, 00°40'W), England

7.V.1902

Publication: Nuttall & Warburton (1911: 182).

N611 R145

1 N, 1 L *Ixodes hexagonus*ex. *Mustela erminea*

Lyndhurst (50°52'N, 01°34'W), England

20.III.1901 G. Tate

Publication: Nuttall & Warburton (1911: 182) indicated that multiple nymphs and larvae were in this collection.

N612 R180

♀'s, N's *Ixodes hexagonus* (1 ♀, 7 N *Ixodes hexagonus*)ex. *Mustela erminea*

Inismore (54°18'N, 07°34'W), Ireland

23.III.1902

Publication: Nuttall & Warburton (1911: 182).

N613 R202

♀'s, N's *Ixodes hexagonus* (5 N *Ixodes hexagonus*)
ex. stoat (*Mustela erminea*)
No other data

N617 R177

1 ♀ *Ceratixodes putus* (*Ixodes uriae*)

ex. wild duck

No other data

Publication: Nuttall & Warburton (1911: 261).

Ixodes uriae is a vector of the viruses tickborne encephalitis, Tuleniy, Oceanside, Zaliv Terpenya, Sakhalin, Tillamook, Avalon, Clo-Mor, Taggart, Bauline, Cape Wrath, Nugget, Tindholmur, Mykines, Great Island, Okhotskiy, Yaquina Head, Poovoot, Paramushir, and Runde.

N618 R220

1 ♂, 1 ♀, 2 N *Ceratixodes putus* (*Ixodes uriae*)

British. E. G. Wheler

No particulars

N619 R147

1 ♂, 2 ♀ *Ixodes tenuirostris* (2 ♂, 2 ♀ *Ixodes trianguliceps*)

ex. *Hypudaus glareolus* (*Clethrionomys glareolus*)

Campfer (46°28'N, 09°48'E), Switzerland

7.VII.1904 [full date on vial label]. K. Jordan.

Publication: Nuttall & Warburton (1911: 248).

Ixodes trianguliceps is a vector of tickborne encephalitis virus.

N621 R204

N's *Ixodes tenuirostris* (1 N *Ixodes trianguliceps*)

ex. *Sorex vulgaris* (*Sorex araneus*)

Bevendean, (50°51'N, 00°05'E), England

VI.1899.

Publication: Nuttall & Warburton (1911: 248), indicated that more than one nymph was in the collection.

N622 R166

♀ *Ixodes tenuirostris* (1 ♀ *Ixodes trianguliceps*)

ex. *Arvicola amphibius* (*Arvicola terrestris*)

Reservoir

6.IV.1892

Publication: Nuttall & Warburton (1911: 248) indicated the collection was from England.

N623 R197

2 ♀ *Ixodes tenuirostris* (*Ixodes trianguliceps*)

ex. *Arvicola agrestis* (*Microtus agrestis*)

Tring (51°48'N, 00°40'W), England

Publication: Nuttall & Warburton (1911: 248).

N624 R149

1 ♀ *Ixodes tenuirostris* (*Ixodes trianguliceps*)

ex. *Arvicola arvalis* (*Microtus arvalis*)

Campfer (46°28'N, 09°48'E), Switzerland

20.VII.1904 K. Jordan

Publication: Nuttall & Warburton (1911: 248).

N625 R148

3 ♀ *Ixodes tenuirostris* (*Ixodes trianguliceps*)

ex. *Arvicola arvalis* (*Microtus arvalis*)

Campfer (46°28'N, 09°48'E), Switzerland

5.VII.1904 K. Jordan

Publication: Nuttall & Warburton (1911: 248).

N626 R226

♂'s, ♀'s *Ixodes scapularis* (4 ♂, 4 ♀ *Ixodes scapularis*)

ex. *Cariacus virginianus* (*Odocoileus virginianus*)

Craven Co. (35°07'N, 77°03'W), North Carolina, U.S.A.

13.XI.1907 '[det. C. Warburton 5.II.1909. Found with N666]'

Publication: Nuttall & Warburton (1911: 158) gave the date of collection as XI.1897. The date 13.XI.1897 is also on the vial label.

N633 R169

N's *Amblyomma* sp. (8 N *Amblyomma* sp.)

ex. *Macropus* sp.

No other data

Note: Nuttall 644 also bears the Rothschild number R169 and gives the additional data: W. Australia 28.VII.1900.

N634 R159

Ixodes percavatus (2 ♀, 2 N *Ixodes rothschildi* TYPES)

ex. Puffin *Fratercula arctica*. Wrongly labelled *Ix. putus* '(Pocock)' on back of label; no particulars. (Sent to Neumann who confirmed the determination II.1909.)

No other data.

Publications: Nuttall & Warburton (1911: 221) described the ♀ and N of *Ixodes percavatus rothschildi*. Zumpt (1952: 17) raised this taxon to specific rank; Arthur (1953: 222–226) independently raised *I. percavatus rothschildi* to specific rank; Arthur (1963: 134) referred to 2 ♀, 3 N in the type lot.

There was (IX.1977) a note in the vial with the words '1 N Missing'.

N637 R213

Ixodes bicornis [sex/stage not given] (11 ♀ *Ixodes boliviensis*)

ex. *Felis concolor*

'[American]' No other data

Publication: Nuttall & Warburton (1911: 187) indicated only one ♀ in the collection.

N638 R276

1 ♂, 1 ♀ *Ixodes loricatus*

ex. *Didelphia* (*Didelphis* sp.)

Sapucay. Foster coll.

Note: Locality is probably Sapucaí (25°19'S, 56°55'W), Paraguay, which is in the range of *I. loricatus*. [See also Nuttall 1391].

Publications: Nuttall & Warburton (1911: 269); Cooley & Kohls (1945: 190).

N639 R256

Ixodes loricatus [sex/stage not given] (1 ♂ *Ixodes loricatus*)

ex. 'Piquoti'

No other data

N640 R241

2 ♂, 2 ♀, 2 N *Ixodes loricatus* (2 ♂, 2 ♀ *Ixodes loricatus*)ex. *Ateles melanochir* (*Ateles g. geoffroyi*)

Frontera (18°32'N, 92°38'W), Tabasco, Mexico.

Note following locality '(Compared with Neumann's types at Toulouse, 1910; agrees fully but Nn's type larger).'

Publications: Nuttall & Warburton (1911: 269);

Cooley & Kohls (1945: 190).

N641 R161

Ixodes loricatus [sex/stage not given] (2 ♂, 1 L *Ixodes loricatus*)ex. *Didelphys aurita* (*Didelphys marsupialis*)

Brazil 24.XI.1901

Publications: Nuttall & Warburton (1911: 269);

Cooley & Kohls (1945: 190).

N642 R165

1 ♀, 1 N, 6 L *Ixodes vestitus* (1 ♀, 5 N *Ixodes vestitus*)ex. *Diemenia superciliosa* (*Diemenia textilis*)

Herdman's Lake, near Perth (31°56'S, 115°15'E), W. Australia

B. H. Woodward

Note: Nuttall 628 also bears Rothschild number R165.

Publications: Nuttall & Warburton (1911: 255) indicated larvae as did the catalogue entry. These were missing 7.X.1977. Taylor (1946: 59, 60) repeated Nuttall & Warburton's description and figures. Roberts (1960: 451, 452).

N643 R265

2 N *Ixodes holocyclus*

Perth (31°56'S, 115°15'E), W. Australia

B. H. Woodward coll.

Publication: Nuttall & Warburton (1911: 238).

N645 R275

3 ♀ *Ixodes australiensis*ex. tame dog (*Canis familiaris*)

Cranbrook (34°18'S, 117°32'E), West Australia

1.IV.1900 J. T. Young

Publications: Nuttall & Warburton (1911: 252).

Taylor (1946: 57, 58) repeated Nuttall & Warburton's descriptions and figures.

Note: This collection was seen by R. A. Cooley in 1946 who made 3 slides of dissections (♀ spiracular plate; ♀ legs I & IV; ♀ hypostome) all in the Nuttall collection at the British Museum (N.H.). He gave them the Rocky Mountain Laboratory (RML) number 22284.

N646 R210

Ixodes australiensis [sex/stage not given] (8 ♀ *Ixodes australiensis*)ex. *Bettongia lescuri* (*Bettongia lesueuri*)

Kojonup (33°50'S, 117°09'E), W. Australia

4.XI.1900

Publications: Nuttall & Warburton (1911: 252).

Taylor (1946: 57, 58) repeated Nuttall & Warburton's description and figures. Roberts (1960: 440); Roberts (1970: 40) gave the correct spelling of the locality.

N647 R248

3 ♀ *Ixodes loricatus* var. *spinosus* n. var. Nuttall, 1910 (2 ♀ *Ixodes luciae*)ex. large opossum (*Didelphis* sp.)

Frontera (18°32'N, 92°38'W), Tabasco, Mexico

May. Found with 648. Note long spine on coxa I.

Note: These are the TYPE SPECIMENS of *I. loricatus spinosus*.

Publications: Nuttall (1910: 411), original description. Nuttall & Warburton (1911: 269), repeated original description and figures.

N648 R248

N's & larvae *Amblyomma ?cajennense* (16 N *Amblyomma cajennense*)ex. large opossum (*Didelphis* sp.)

Frontera (18°32'N, 92°38'W), Tabasco, Mexico

May

Note: Found with Nuttall 647

N649 R185

1 N *Ixodes vespertilionis*.ex. *Vespertilio tricolor* (*Myotis tricolor*)

Kei Road, W. Kingwilliamstown, S. Australia [S.

Australia crossed out and S. Africa inserted].

Kei Road, King William's Town (32°51'S, 27°22'E), South Africa.

Purchased of Capt. H. Trevelyan.

Publications: Nuttall & Warburton (1911: 277).

Taylor (1946: 41) considered *I. vespertilionis* 'very doubtfully Australian' and 'original specimen is unfortunately lost'. Hoogstraal (1956: 569, 570) considered this collection to be of South African origin.*Ixodes vespertilionis* is a vector of the viruses Issyk Kul and tickborne encephalitis.

N650 R203

1 ♀ *Ixodes facialis* TYPE (HOLOTYPE)ex. *Dasyurus geoffroyi*

Cranbrook (34°18'S, 117°32'E), W. Australia

5.III.1900

Publications: Warburton & Nuttall (1909: 58) original description. Nuttall & Warburton (1911: 248) repeated the original description and figures as did Taylor (1946: 56). Roberts (1960: 445) incorrectly gave the collection date as March 1910.

N652 R168

2 ♀ *Ixodes unicavatus* (1 ♀, 1 N *Ixodes unicavatus*)
ex. shag (*Phalacrocorax aristotelis*)
Plymouth (50°23'N, 04°10'W), England
IX.1897

Publications: Nuttall & Warburton (1911: 266)
indicated that the collection consisted of only one
nymph. Arthur (1963: 126) repeated this error.

N666 R226

1 ♀ *Dermacentor nigrolineatus* (1 ♀ *Dermacentor*
albipictus)

ex. *Cariacus virginianus* (*Odocoileus virginianus*)
Craven Co. (35°07'N, 77°03'W), North Carolina,
U.S.A. Found with N626 q.v. for details.

C. Warburton det. 1917

Dermacentor albipictus is a vector of Colorado
tick fever virus.

N667 R250

♀'s, N's *Ixodes unicavatus* (3 ♀, 10 N, 3 L *Ixodes*
unicavatus)

ex. *Phalacrocorax graculus* (*Phalacrocorax*
aristotelis)

Cromarty (57°40'N, 04°02'W), Scotland.

10.III.1898 W. Roy

Publications: Nuttall & Warburton (1911: 266);
Arthur (1963: 126).

N669 R178

Haemaphysalis humerosa [sex/stage not given]
TYPES (2 ♂, 1 ♀, 1 N *Haemaphysalis humerosa*
TYPES)

ex. *Pameles macrura* (*Isodon macrourus*)
Barrow Island (20°48'S, 115°23'E), N. W.
Australia

Note: An additional 1 ♂ of this collection was sent
to Dr L. O. Howard, U.S. Dept. of Agriculture,
Washington, D.C., U.S.A. 21.V.1909.

Publications: Warburton & Nuttall (1909: 60)
original description. Nuttall & Warburton (1915:
496, 497) and Taylor (1946: 82) repeated original
description and figures. Roberts (1963: 39) dis-
cussed the type series and the note inserted in the
tube by Nuttall that one specimen was missing
20.X.1934.

N670 R172

Haemaphysalis elongata [sex/stage not given] (1 ♂
Haemaphysalis elongata, 4 ♂, 2 ♀ *Haema-*
physalis tiptoni)

ex. *Centetes ecaudatus* (*Tenerec ecaudatus*)
Madagascar

Note: The male of *H. elongata* has been given a
collection number by the Rocky Mountain
Laboratory (RML 71004) and by Harry
Hoogstraal (HH44251).

Publications: Nuttall & Warburton (1915: 500).
Hoogstraal (1953: 59, 64) discussed the two
species represented in Nuttall & Warburton's
(1915) figures and descriptions.

N826 R189

2 ♀ *Ixodes hexagonus* (*Ixodes rubidus*)
ex. Coypu, *Myopotamus coypus* (*Myocaster*
coypus)

S. America. No further particulars

Publication: Nuttall & Warburton (1911: 183).

N892 R295

Haemaphysalis bispinosa [sex/stage not given] (7
♂, 7 ♀ *Haemaphysalis bispinosa*)

ex. *Canis familiaris*

Luthaia Mts, Assam

Note: The locality is questionable. There are no
Luthaia Mts as written in the catalog or Southaia
Mts as in Nuttall & Warburton (1915: 431) to be
found in gazetteers of India. I believe the locality
to be Lushai Hills (23°10'N, 92°50'E), Assam,
India as in N576, (R294a) and N582 (R284).

Publication: Nuttall & Warburton (1915: 431).

N1066 R245

5 ♀ *Ixodes texanus* var. (*Ixodes* sp. not *I.*
texanus or *I. hearlei*)

No other data

N1067 R200

1 ♀ *Ixodes hexagonus*

ex. fox (*Vulpes vulpes*)

Boxworth (52°16'N, 00°02'W), England

22.I.1898

Publication: Nuttall & Warburton (1911: 182).

N1068 R190

6 ♂, 6 ♀ *Ixodes canisuga* (4 ♂, 4 ♀ *Ixodes lividus*)

Lyndhurst (50°52'N, 01°34'W), England

11.VII.1900

Publications: Nuttall & Warburton (1911: 214).
Arthur (1963: 92) indicated 6 ♂, 6 ♀ present. There
were 4 ♂, 4 ♀ in the collection as of IX.1977.

N1069 R146

1 ♂, 2 ♀, 3 N *Ixodes tenuirostris* (*Ixodes*
trianguliceps)

ex. *Arvicola arvalis* (*Microtus arvalis*)

Campfer (46°28'N, 09°48'E), Switzerland

11.VII.1904 Dr K. Jordan

Publication: Nuttall & Warburton (1911: 248).

N1105 None

3 ♂, 3 ♀, 6 N *Dermacentor albipictus*

Blucher Hall (51°06'N, 120°01'W), British
Columbia, Canada

III.1910. Rec'd 2.IV.1910 from Hon. N. C.
Rothschild (London).

N1151 R296

10 L *Argas vespertilionis*

ex. *Pipistrellus pipistrellus*

Oristano (39°54'N, 08°35'E), Sardinia

May 1907 Dr A. Krausse

- N1152 R175
6 L *Argas vespertilionis*
ex. *Vesperugo pipistrellus* (*Pipistrellus pipistrellus*)
Tring (51°48'N, 00°40'W), England
1.IX.1898
- N1153 R244
2 L *Argas vespertilionis*
No other data
- N1154 R271
2 L *Argas vespertilionis* (*Argas (Carios) sp.*)
Perth (31°56'S, 115°50'E), W. Australia
Note: These specimens may represent a new species. It is not *Argas australiensis*, *Argas daviesi* or *Argas dewae*, the currently known representatives of the subgenus *Carios* in Australia.
- N1159 R142
N's *Ixodes hexagonus* (3 N *Ixodes hexagonus*)
ex. *Mustela erminea*
Tring (51°48'N, 00°40'W), England
10.IV.1902.
Note: One nymph (RML 16476) of this collection was donated to the Rocky Mountain Laboratory collection by P. A. Buxton, London School of Hygiene and Tropical Medicine, in 1940. (See also Nuttall 601).
Publication: Nuttall & Warburton (1911: 182).
- N1160 R194
L's *Ixodes hexagonus* (17 L *Ixodes hexagonus*),
ex. fox *Vulpes vulpes* (cub)
Boxworth (52°16'N, 00°02'W), England
30.III.1900
Note: 2 additional larvae from this collection were sent to Prof. R. Matheson, Cornell University, Ithaca, N.Y., U.S.A., 27.V.1929.
Publication: Nuttall & Warburton (1911: 182).
- N1161 R278
♀ *Ixodes tenuirostris* (*Ixodes trianguliceps*)
Tarasp (46°38'N, 10°25'E), Switzerland
summer 1901
Publication: Nuttall & Warburton (1911: 248)
- N1162 R207
2 L *Ixodes* sp.
ex. *Dromicia concinna* (*Cercartetus concinnus*)
Note: The nocturnal marsupial *C. concinnus* inhabits the southern part of western and central Australia.
- N1163 R247
L's *Argas vespertilionis* (13 L *Argas vespertilionis*)
ex. *Vesperugo pipistrellus* (*Pipistrellus pipistrellus*)
Yalding (51°14'N, 00°26'E), England.
8.VIII.1897 [However, 1997 was written]
W. R. Ogilvie-Grant
- N1164 R250, 251
L's *Argas* sp. (5 L *Argas boueti*)
ex. either *Phalacrocorax graculus*, Cromarty, or *Megaderma cor*, Salamana, Havish, 4,500 ft (Number on cork defaced)
ex. *Megaderma cor*.
Salamana, Havish 1,372 m (locality not verified)
Notes: *Megaderma cor* ranges in East Africa from Ethiopia to Tanzania.
The correct Rothschild number for this collection is R251. For R250 see Nuttall 667.
- N1166 R230
10 nymphs [genus & species not given] (*Amblyomma* sp.)
ex. *Mus escularis* (name not verified)
St Aignan. Possibly Misima Island (10°41'S, 152°42'E), Louisiade Archipelago. This island was formerly known as St Aignan.
VIII-XI. 1897 (Meek)
- N1167 R186
N1167a
2 N *Ixodes* sp. [1167], 1 ♂ *Hyalomma aegyptium* [1167a] (*Hyalomma truncatum*)
ex. a 'Sassaby' a bastard hartebeest (*Damaliscus lunatus*) Republic of South Africa.
Date?
Hyalomma truncatum is a vector of the viruses Dugbe, Bhanja, Jos, and Crimean Congo hemorrhagic fever.
- N1211 R237
2 N *Ixodes* sp. (2 N, 1 L *Ixodes fecialis*)
ex. *Tarsipes rostratus* or *Smiothopsis murinus* [vial label reads *S. murinus*] (*Sminthopsis murina*)
Albany (35°02'S, 117°53'E), W. Australia
21.XII.1900 B. H. Woodward
- N1212 R272
5 N *Ixodes* sp. (*Ixodes holocyclus*)
Perth (31°56'S, 115°50'E), W. Australia
B. H. Woodward
No further details
- N1213 R216
1 ♀ *Ixodes fecialis* var. *aegrifossus* (*Ixodes fecialis*)
ex. *Perameles obesula* (*Isoodon obesulus*)
Bannister (32°40'S, 116°33'E), W. Australia
21.VIII.1900
Publication: Nuttall & Warburton (1911: 250).
- N1386 R249
N's, L's *Amblyomma* sp. (14 N, 2 L *Amblyomma* sp.)
ex. *Cariacus virginianus mexicanus* (*Odocoileus virginianus*)
San Rafael (20°12'N, 96°51'W), Veracruz, Mexico
27.III.1903

N1387 R264

1 N? genus (*Dermacentor andersoni*)ex. *Lagomys princeps* (*Ochotona princeps*)

Canadian National Park, ? Ottawa, Canada

5.VIII.1899 J. F. Dippie

Note: Ottawa, Ontario is far to the east of the ranges of *D. andersoni* and the pika. The Canadian National Park and the date 1899 suggests a relationship to N1390 (R280), Banff National Park, which is within the range of both *O. princeps* and *D. andersoni*.

Dermacentor andersoni is a vector of the viruses Powassan and Colorado tick fever, the bacterium of tularemia, and the rickettsia of Rocky Mountain spotted fever.

N1389 R155

larvae *Ixodes* sp. (3 N *Ixodes* sp.)ex. *Cryomys longicaudatus* (*Oryzomys longicaudatus*)

Valparaiso (33°02'S, 71°38'W), Chile

Date? J. A. Wolffshon

N1390 R280

2 N ? genus '(has eyes!)' (2 N *Dermacentor andersoni*)

Banff (51°38'N, 116°22'W), Alberta, Canada

19.VII.1899

N1391 R269

4 N ? genus (3 N *Amblyomma* sp.)ex. *Didelphys* sp. (*Didelphis* sp.)

Sapucaí (25°19'S, 56°55'W), Paraguay

? Date

N1392 R187

N's *Amblyomma* sp. (10 N *Amblyomma* sp.)ex. Hare wallaby (*Lagorhynchus conspicillatus*)

Barrow Island (30°48'S, 115°23'E), N. W. Australia

N1393 R176

larvae *Amblyomma* sp. (64 L *Amblyomma* sp.)ex. *Bettongia penicillata*

Bokerup, W. Australia. Possibly Bokarup Swamp (34°24'S, 116°50'E).

20.IV.1900

N1394 R227

2 N *Amblyomma* sp.ex. *Ontalis vetula macalii* (*Neotoma alleni vetula*)

Frontera (18°32'N, 92°38'W), Tabasco, Switzerland [sic.] Mexico

18.V.–

N1395 R163

N's *Rhipicephalus* sp. (2 N *Rhipicephalus* sp.)ex. *Hyaena crocuta* (*Hyaena hyaena*)

Darie (locality not verified)

? Date. Von Erlanger

N1396 R246

1 N *Amblyomma* sp.ex. Black squirrel (*Sciurus* sp.)

Frontera (18°32'N, 92°38'W), Tabasco, Mexico

19.V.–

N1397 R171

larvae *Amblyomma* sp. (26 L *Amblyomma* sp.)ex. *Macropus eugenii* (*Macropus fuliginosus*)

Cranbrook (34°18'S, 117°32'E), W. Australia

6.III.1910

N1398 R150

1 larvae ? genus (1 L *Hyalomma* sp.)ex. *Gerbillus gerbillus*

Zaghig*

1.III.1903 Hon. N. C. Rothschild

*Locality not verified. However, N. C. Rothschild was in the Nile delta early in 1903. Quite possibly the locality is Zagazig (30°35'N, 31°31'E), Egypt.

N1399 R162b

N's *Ixodes* sp. (4 N, 4 L *Ixodes texanus*)ex. *Putorius energermanis* (*Mustela vison*)

Sumas, B.C., Canada*

III.1903

*Either Sumas Lake (49°07'N, 122°02'W), British Columbia, Canada or Sumas (49°00'N, 122°13'W), Washington, U.S.A.

N1497 None

1 N *Dermacentor* sp. (*Dermacentor albipictus*)ex. Moose (*Alces alces*)

New Brunswick, (47°00'N, 66°00'W), Canada

30.XI.1911 J. Birrell coll.

N1498 None

1 ♂ *Dermacentor albipictus*ex. man (*Homo sapiens*) (Dr Walker)

New Brunswick (47°00'N, 66°00'W), Canada

29.XI.1911 J. Birrell coll.

N1499 None

2 ♂ *Dermacentor albipictus*ex. Moose (*Alces alces*)

New Brunswick (47°00'N, 66°00'W), Canada

30.XI.1911 J. Birrell coll.

N1500 None

2 ♂, 1 ♀, 1 N *Dermacentor albipictus*ex. carabou [sic.] (*Rangifer tarandus*)

New Brunswick (47°00'N, 66°00'W), Canada

25.XI.1911 J. Birrell coll.

N1501 None

1 N *Dermacentor* sp. (*Dermacentor albipictus*)ex. carabou [sic.] (*Rangifer tarandus*)

New Brunswick (47°00'N, 66°00'W), Canada

25.XI.1911 J. Birrell coll.

N1502 None

1 N *Dermacentor* sp. (*Dermacentor albipictus*)ex. carabou [sic.] (*Rangifer tarandus*)

New Brunswick (47°00'N, 66°00'W), Canada

25.XI.1911 J. Birrell coll.

N1503 None

1 ♂ *Dermacentor* sp. (5 N *Dermacentor albipictus*)
ex. carabou [sic.] (*Rangifer tarandus*)
New Brunswick (47°00'N, 66°00'W), Canada
25.XI.1911 J. Birrell coll.

N1504 None

1 ♀ *Ixodes hexagonus* (*Ixodes cookei*) '[Not
typical—bad condition; possibly *I. rubidus*']
ex. black cat
New Brunswick (47°00'N, 66°00'W), Canada
19.XII.1911 J. Birrell coll.
Ixodes cookei is a vector of Powassan virus.

N3138 R926

1 ♂ *Aponomma laeve* var. *capensis* (*Aponomma*
sp.)
ex. *Echidna* sp.
No further data
Gift of Hon. N. C. Rothschild "(unmounted by
me from a slide R926)". L. E. Robinson det.
Note: This is not *Aponomma concolor* or *A.*
oudemansi. Coxal spurring is similar to *A. pattoni*
but the specimen lacks cervical pits. It is a species
near *A. pattoni*.

N3160 R238

2 ♂, 1 ♀, 1 N *Dermacentor reticulatus* (1 ♂, 1 ♀, 1
N *Dermacentor reticulatus*)
Revelstoke, and Revelstoke Point, now known as
Stoke Point (50°18'N, 04°01'W), England
III.1902.

Dermacentor reticulatus is a vector of the viruses
tickborne encephalitis, Russian spring summer
encephalitis, and Omsk hemorrhagic fever.

N3330 R243

1 ♀ *Dermacentor auratus* (*Dermacentor* sp.)
No other data
Note: Nuttall 565 and 575 also bear Rothschild
number R243.

N3502 None

♂'s, ♀'s *Dermacentor andersoni* (7 ♂, 9 ♀
Dermacentor andersoni)
Okanagan Falls (49°21'N, 119°31'W), British
Columbia, Canada
V.1913 Rothschild coll.
Gift of Seymour Hadwen, 1922

N3537 None

N's *Haemaphysalis leachi* (10 N *Haemaphysalis*
erinacei)
ex. *Dipodillus campestris* (*Gerbillus campestris*)
Timgad (35°30'N, 06°35'E), Algeria
15.IV.1920 N. C. Rothschild & K. Jordan, coll.
Publication: Hoogstraal (1955: 222, 223) (see note
under 3539).

N3538 None

N's *Haemaphysalis leachi* (11 N *Haemaphysalis*
erinacei)
ex. *Dipodillus campestris* (*Gerbillus campestris*)
Timgad (35°30'N, 06°35'E), Algeria
15.IV.1920 N. C. Rothschild & K. Jordan coll.

N3539 None

N's *Haemaphysalis leachi* (4 N *Haemaphysalis*
erinacei)
ex. *Dipodillus campestris* (*Gerbillus campestris*)
Timgad (35°30'N, 06°35'E), Algeria
17.IV.1920 N. C. Rothschild & K. Jordan coll.
Publication: Hoogstraal (1955: 223) gave the
Nuttall number 3739 for this collection. He
indicated the total number of nymphs as 17 in
combined collections 3537 and 3539. In 1977 the
total number of nymphs in these two collections
was 14.

**A single tick collection given by the Hon.
Walter Rothschild to G. H. F. Nuttall via Guy
A. K. Marshall**

N888 None

2 ♂, 1 ♀ *Hyalomma aegyptium* (*Hyalomma*
rufipes)
ex. giraffe (*Giraffa camelopardalis* subsp.)
Ogo, Senegal
ex. Riggensbach coll. given by Hon. Walter
Rothschild to African Entomological
Committee (rec'd 19.X.1909 from Guy A. K.
Marshall).

Notes: There are two populated places and one
campsite with the name Ogo in Senegal: PPL.
14°35'N, 15°50'W; PPL. 15°33'N, 13°17'W;
CMP. 14°45'N, 15°03'W.

18 specimens of this collection were received
11.X.1909 by the Entomological Research
Committee (Anon. 1910).

Rothschild specimens missing from Nuttall collection

N75 R1015, 1017, 1019

3 ♂ *Amblyomma clypeolatum* (= *atrogenatum* N.
& W.)
ex. tortoise
Zoological Society's Gardens, London,

11.X.1895

Presented by N. C. Rothschild
Mounted (i) opaque & (ii) (iii) transparent on 3
slides nos. 1015, 1017, 1019
L. E. Robinson det. 26.III.1919

N76 R964

1 ♀ *Amblyomma* sp.

ex Monitor

Kalao Island. No further data

Mounted opaque on slide No. 964 from N. C. Rothschild

N77 R1033, 1034, 1035

3 ♂ *Amblyomma marmoreum*

ex. *Testudo pardalis* (leopard tortoise)

No further data. Mounted as transparent specimens on slides Nos. 1033, 1034, 1035

Presented by N. C. Rothschild

L. E. Robinson det. 26.III.1919

N78 R996, 997, 999

1 ♂, 2 ♀ *Amblyomma albolimbatum*

ex. black & white snake

30.I.1896. No further data. Mounted as transparent specimens Nos. 997, 996, 999

Presented by N. C. Rothschild

L. E. Robinson det. 26.III.1919.

N90 R938-941

4 ♂ *Aponomma gervaisi* var. *lucasi*

ex. *Ophiophagus bungarus* (Hamadryad)

Presented by N. C. Rothschild

No particulars. Mounted on slides 938-941; 2 in glycerine, 2 in balsam

C. Warburton det. I.1915

N91 R900

1 ♂ *Aponomma gervaisi* var. *lucasi*

ex. *Varanus civitatus* (Monitor)

Presented by N. C. Rothschild

No particulars. Mounted as slide 900 in dil. glycerin. C. Warburton det. I.15

N92 R962, 965

2 ♂ *Aponomma gervaisi*

ex. *Varanus civitatus* (Monitor)

Presented by N. C. Rothschild

No particulars. Mounted as slides 962, 965 in glycerin. C. Warburton det. I.1915

N93 R959, 963, 964, 966

4 ♂, 1 ♀ *Amblyomma decoratum*

ex. Monitor

Kalas Island

Presented by N. C. Rothschild

No particulars. 5 slides, 3 in glycerin 2 ♂ in balsam: R959, 961, 963, 964, 966. C. Warburton det. I.1915

N216 R961-973

♀'s, N's, L's *Ixodes hexagonus*

ex. *Lutra vulgaris*

No doubt British

N. C. Rothschild 7 slides

N217 R930, 931

2 ♀ *Ixodes hexagonus*

ex. fox (*Canis vulpes*)

No doubt British

Gift of N. C. Rothschild (2 slides R930-931)

N298 R1000-1011

6 ♀, 5 N, 1 L *Ixodes hexagonus*

ex. stoat (*Putorius erminea*)

No doubt British

Gift of N. C. Rothschild 12 slides

N322 R929

1 ♀ *Ixodes hexagonus*

ex. *Mustela putorius* (ferret)

Probably British

Gift of N. C. Rothschild. R929 mounted in glycerin in glass cell. G. H. F. Nuttall det.

N324 R944-946

3 N *Ixodes hexagonus*

ex. *Erinaceus europaeus*

Probably British

Gift of N. C. Rothschild (3 slides R944-946). G. H. F. Nuttall det.

N395 R988-990

3 L *Ixodes unicavatus* slightly fed

ex. *Phalacrocorax graculus* (shag)

No locality etc. Probably British

Gift of N. C. Rothschild. Mounted on 3 slides R988-990. G. H. F. Nuttall det. 13.II.1915

N396 R1032

1 N *Ixodes brunneus*?

ex. *Erithacus rubecula* (robin)

No data. Probably British

Gift of N. C. Rothschild

Mounted on a slide R1032

N397 R911

1 ♂ *Amblyomma hirtum*

ex. bird (in spirit)

Galapagos Islds, Pacific

Ocean (W. of Ecuador)

Gift of N. C. Rothschild

Mounted on a slide R911. L. E. Robinson det. 6.III.1915

N509 R982, 984-987

4 ♀, 2 N *Ixodes ricinus*

ex. *Cervus capreolus* (roe deer)

? British

Gift of N. C. Rothschild

Mounted on 5 slides R982, 984-987

N516 R901-3, 905

5 N *Ixodes putus*

ex. *Diomedea salvinii* (albatross)

No data

Gift of N. C. Rothschild 5 slides

R901-3, 905

N517 R934

1 ♀ *Ixodes putus*

ex. *Uria lachrymans* (ringed guillemot)

No data
Gift of N. C. Rothschild 1 slide

N518 R975-979

5L *Ixodes putus*

ex. Puffin

No data. Probably British

Gift of N. C. Rothschild 5 slides

G. H. F. Nuttall det. 12.II.1915

N539 R1036

♂ *Haemaphysalis leachi* 1 slide

ex. *Erinaceus albiventris*

Gebel Auli, White Nile, Egypt

9.V.1900 S. & F. Witherby

Received from N. C. Rothschild 1908

Det. G. H. F. Nuttall 27.I.1909

N544 R253

Amblyomma sp. not *varium*; bad condition

ex. 3-toed sloth (*Bradypus tridactylus*)

Brazil

N548 R257

Aponomma gervaisi

ex. Boa

Feb. 1887

Given to D. S. MacLagan 14/10/38

N551 R181

Amblyomma triguttatum

ex. Kangaroo (sic.)

Barrow Island, N. W. Australia

20.XI.1900 C. J. T. Tanney

N571 R279

Aponomma sp.

ex. *Diemenia superciliosa*

Herdman's Lake, Perth, West Australia

N586 R193

♂ *Rhipicephalus sanguineus*

ex. Camel

Locality unknown

N587 R151

2 ♂ *Rhipicephalus sanguineus*

Zaghig, 25.II.1908

N. C. Rothschild coll.

N595 R294

Ornithodoros moubata

No history

Note: Nuttall 577 also bears Rothschild number R294

N596 R157

N's *Ornithodoros megnini*

Okanagan, British Columbia

12.XII.1902 Allan Brooks

Note: *Otobius* is the correct genus for this tick

N620 R942

1 ♀ *Ixodes tenuirostris*

ex. *Mus minutus* (Harvest mouse)

No further particulars '[Mounted on a slide]'

N628 R165

♀ & N *Ixodes ricinus*

No particulars

Note: Nuttall 642 also bears Rothschild number

R165

N629 R233

4 ♂ *Ixodes ricinus*

ex. stag

No particulars

N630 R217

3 N *Ixodes ricinus*

ex. *Sciurus vulgaris*

17.IV.1901 Timmer, Ireland

N631 R223

4 ♀ *Ixodes ricinus*

ex. *Erinaceus europaeus*

Belgium E. A. Boulenger coll.

N632 R173

2 ♀ *Ixodes ricinus*

ex. fox

No particulars

N644 R169

2 ♀ *Ixodes holocyclus*

ex. *Macropus* sp.

W. Australia 28.VII.1900

Note: Nuttall 633 also bears Rothschild number

R169

N656 R205

2 L *Ixodes ricinus*

ex. *Mustela erminea*

Lyndhurst, Hants., England

25.VII.1900 G. Tate coll.

N674 R922-924

3 ♀ *Ixodes hexagonus*

ex. *Myopotamus coypu*

? locality, host a rodent from S. America

Presented by N. C. Rothschild (R922-924) '[see record of 2 other ♀'s in Ticks Part II, p. 183]'

G. H. F. Nuttall. det. II.1915

N746 R232

larvae *Ixodes hexagonus*

ex. polecat

Aberystwyth, Wales

VIII.1900

N1388 R162

1 L *Argas* sp.

ex. *Putorius energermanis*

Sumas, B.C., Canada

III.1903

N3136 R958

1 ♂ *Hyalomma* sp.

- ex. *Capra falconeri* (the Markhoor)
 No further data
 Gift of N. C. Rothschild (slide R958)
 Note: The host occurs in Kashmir, Afghanistan, Gilgit, etc.
- N3139 R1012–1020
Hyalomma syriacum
 ex. tortoise
 No further data
 Gift of N. C. Rothschild (5 slides i–v R1012–1020)
- N3140 R1022, 1023
 2 ♀ *Hyalomma syriacum*
 ex. *Testudo pardalis*
 No further data
 Gift from N. C. Rothschild (2 slides, R1022–1023)
- N3141 R906, 1031
Hyalomma syriacum
 ex. *Araconda* [sic]
 No further data (evidently bought slides from M. Pillischer, optician, 88 New Bond St., London W.) Gift of N. C. Rothschild (2 slides R906, 1031)
- N3157a R1026–1029
 N(3157) 3 ♂ *Rhipicephalus evertsi*
 (a) 1 ♂ *Boophilus decoloratus*
 ex. Zebra No locality
 Gift of N. C. Rothschild 1908
 Mounted on slides in balsam (R1026–1029)
- R. evertsi* det. C. Warburton 18.III.1915
B. decoloratus det. C. Warburton & G. H. F. Nuttall 1915
- N3158 R907
 1 ♀ *Rhipicephalus haemaphysaloides*
 India
 Mounted on slide in glycerin
 Gift of N. C. Rothschild 1908
 (Prep. bought from Fredk. Enock*)
 *Spelled Enock in this collection, but see N3159
- N3159 R908–910
 3 N *Argas reflexus*
 India
 3 slides, glycerine in cells G. H. F. Nuttall det. III.1915
 Gift of N. C. Rothschild 1908
 (3 slides Nos. 908–910) Fredk. Enock prep.
 Cost 2 shillings each!
- N3351 None
 ♀ *Amblyomma varium*
 ex. *Bradypus tridactylus* (sloth)
 Gift of N. C. Rothschild years ago.
 Scutum, legs, spiracle on 3 slides
 L. E. Robinson det. 26.III.1919
- N3536 None
 1 ♀ *Argas persicus*
 Found on wall
 Djama, Algeria
 25.II.1920
 N. C. Rothschild & K. Jordan coll.

PART II

Rothschild specimens donated to British Museum (Natural History)

Species of Ixodoidea represented in the collection of the British Museum (Natural History), donated by the Hon. N. C. Rothschild

K numbers follow each species. Numbers in parentheses refer to missing collections. Thus, validity of original determinations is unverified.

ARGASIDAE

- Argas persicus* (Oken) K1, K2, (K148)
Argas reflexus (Fabricius) K3
Argas sanchezi Dugès K4
Ornithodoros talaje Guérin-Méneville K5

IXODIDAE

- Amblyomma albolimbatum* Neumann K6
Amblyomma americanum (Linnaeus) K7
Amblyomma brasiliense Aragão K8

- Amblyomma cajennense* (Fabricius) K9
Amblyomma calcaratum Neumann K10
Amblyomma compressum Macalister K11
Amblyomma gemma Dönitz K12, K13, (K149)
Amblyomma humerale C. L. Koch K14, K15
Amblyomma incisum Neumann K16
Amblyomma longirostre (C. L. Koch) K17, K18
Amblyomma maculatum C. L. Koch K19, K20, K21, K22
Amblyomma naponense (Packard) K23
Amblyomma nodosum Neumann K8, K24, K25

- Amblyomma ovale* C. L. Koch K8, K23, K26, K27, K28, K29, K30, K31, K32
Amblyomma postoculatum Neumann K33
Amblyomma pseudoconcolor Aragão K34
Amblyomma testudinarium C. L. Koch K35
Amblyomma variegatum (Fabricius) K36, K37
Amblyomma sp. K38, K39
Aponomma concolor Neumann K40, K41, K42, K43
Aponomma decorosum (L. Koch) K44, K45, K46, K47
Aponomma exornatum (C. L. Koch) K48
Aponomma fimbriatum (C. L. Koch) K49
Aponomma gervaisi var. *trimaculatus* (Lucas) (K150)
Aponomma latum (C. L. Koch) K50
Aponomma trimaculatum (Lucas) K51
Boophilus decoloratus (C. L. Koch) K52
Boophilus microplus (G. Canestrini) K53
Dermacentor atrosignatus Neumann group K54
Dermacentor reticulatus (Fabricius) K55, K56
Haemaphysalis bancroftii Nuttall and Warburton K57, K58, K59, K60
Haemaphysalis calcarata Neumann K61
Haemaphysalis juxtakochi Cooley K53
Haemaphysalis lagostrophii Roberts K33
Haemaphysalis leachi (Audouin) K62, K63, K64, K66, K67, K68, K69, K70, K71, K72, K73, K74, K75, (K151)
Haemaphysalis leachi indica Warburton (K152)
Haemaphysalis leachi (Audouin) group K76
Haemaphysalis novaeguineae Hirst K77, K78, K79
Haemaphysalis parvata Neumann K80
Haemaphysalis spinigera Neumann K81
Haemaphysalis spinulosa Neumann K82, K83
Haemaphysalis sulcata G. Canestrini, and Fanzago K84, K85
Haemaphysalis tibetensis Hoogstraal K86
Hyalomma aegyptium (Linnaeus) K87
Hyalomma anatolicum excavatum C. L. Koch K88
Hyalomma marginatum C. L. Koch K89
Hyalomma truncatum C. L. Koch K90, (K153)
Hyalomma sp. K91, K92, K93
Ixodes alluaudi Neumann K94, K95, K96, K97, K98
Ixodes cordifer Neumann K99, K100, K101, K102
Ixodes fecialis Warburton and Nuttall K103
Ixodes hexagonus Leach K104, K105, K106, K107, K108, K109, K110
Ixodes loricatus Neumann K111, K112
Ixodes luciae Senevet K113
Ixodes ornithorhynchi Lucas K114
Ixodes cumulatimpunctatus Schulze K115
Ixodes ricinus (Linnaeus) K116, (K154)
Ixodes tasmani Neumann K117
Ixodes thomae Arthur and Burrow K69
Ixodes trianguliceps Birula K118
Ixodes vespertilionis C. L. Koch K119, K120, K121, K122, K123, K124, (K155)
Rhipicephalus haemaphysaloides Supino K125
Rhipicephalus jeanneli Neumann K126
Rhipicephalus kochi Dönitz K127
Rhipicephalus kochi Dönitz group K128
Rhipicephalus longicoxatus Neumann K127
Rhipicephalus pravus Dönitz K127, K129, K130, K131
Rhipicephalus pulchellus (Gerstäcker) K93, K132
Rhipicephalus sanguineus (Latreille) K133, K134, K135, K136, K137, K138, K139, K140, K141, (K156)
Rhipicephalus simus C. L. Koch K142, K143
Rhipicephalus sp. K144, K145, K146, K147

Rothschild specimens in British Museum (Natural History) collection with type status

B.M.(N.H.) Accession No.

None

1914.11.17.1-46.

None

Dermacentor reticulatus aulicus Hirst, 1916. *Ann. Mag. nat. Hist.* (8), 17 : 308.

Haemaphysalis spinigera novaeguineae Hirst, 1914. *Trans. zool. Soc. Lond.* 20: 325, fig. 16.

Haemaphysalis tibetensis Hoogstraal, 1965. *J. Parasit.* 51: 452, figs. 1-26.

Rothschild specimens in British Museum (Natural History) collection

ARGASIDAE

K1 1912.6.21.21

1 ♂ *Argas persicus*

In railway carriage

El Kantara (35°13'N, 05°43'E), Algeria

17.III.1911

Hon. Walter Rothschild & Ernst Hartert

Argas persicus is a vector of Crimean Congo hemorrhagic fever virus.

K2 1919.8.14.1-70 (pt)

1 ♀ *Argas persicus*

No host

Ouargla house (locality not verified)

E. Hartert and C. Hilgert

Note: The locality is probably a house in Ouargla (31°57'N, 05°20'E), Algeria.

K3 1912.6.21.1-2

1 ♀, 1 N *Argas reflexus*

ex. *Columba livia*

Leipzig (51°18'N, 12°20'E), German Democratic Republic

V.1910

O. Fritzsche

Argas reflexus is a vector of the viruses Pontevs and Grand Arbaud.

K4 1912.12.4.1-8

Argas persicus (7 ♂, 5 ♀, 3 N *Argas sanchezi*)

ex. chicken

Price, Pinal Co. (33°05'N, 111°30'W), Arizona, U.S.A.

27.VII.1911

Dr R. E. Kunz

K5 None

1 ♂, 3 ♀, 3 N *Ornithodoros talaje*

ex. native house

Colombia, S. America

IXODIDAE

K6 1912.6.21.304-318

Amblyomma albolimbatum (19 ♂, 6 ♀ *Amblyomma albolimbatum*; 1 ♀ *Haemaphysalis* sp.; 1 ♀ *Haemaphysalis* sp.)

ex *Trachysaurus rugosus*

Bernier Is. (24°52'S, 113°08'E), W. Australia 1910

B. H. Woodward

Note: 1 ♂, 1 ♀ included in the above total were seen by R. A. Cooley in 1946 who made six slides of dissections (RML 22306).

The *Haemaphysalis* specimens represent either two species or a single exceptionally variable species (Hoogstraal, personal communication).

K7 None

Amblyomma sp. (1 N *Amblyomma americanum*) ex *Scuirus niger*

Mount Pleasant (32°47'N, 79°52'W), South Carolina, U.S.A.

1909

A. T. Wayne

Amblyomma americanum is a vector of Lone Star virus.

K8 None

Amblyomma nodosum (6 ♂, 1 ♀ *Amblyomma brasiliense*; 25 ♂, 5 ♀ *Amblyomma nodosum*; 1 ♀ *Amblyomma ovale*)

Host unknown

Joinville (26°18'S, 48°50'W), Humboldt, Estado de Santa Catharina, Brazil

25.VI.1912

W. Ehrhardt

K9 1912.6.21.326-337

6 ♂, 11 ♀, 3 N *Amblyomma cajennense*

ex. cattle, *Canis familiaris* & *Homo sapiens*

St. Ann's (18°21'N, 77°16'W), Jamaica

22-29.III.1911

F. E. Sherlock

K10 None

Amblyomma concolor? '♀ etc.' (7 ♀, 1 N, 4 L *Amblyomma calcaratum*)

ex. *Tapir americanus* (*Tapirus terrestris*)

Joinville (26°18'S, 48°50'W), Humboldt, Estado de Santa Catarina, Brazil

W. Ehrhardt 15.IX.1912

K11 1912.6.21.299-302

Amblyomma cuneatum (Species epithet crossed out and *compressum* inserted) (1 ♂, 4 ♀ *Amblyomma compressum*)

ex. Pangolin (or Scaly Ant-Eater) *Manis* sp.

Bibianiha, Gold Coast. Bebianiha (05°43'N, 00°27'W) or other populated places of this name nearby. Ghana

9.XII.1911

H. G. F. Spurrell

Note: Vial label gives accession number as 1912.6.21.299-303

K12 1911.12.9.1-320 pt

2 ♀ *Amblyomma gemma*

ex. Oxen

Voi (03°23'S, 28°34'E), Kenya

25.IV.1910

Robin Kemp

K13 1911.12.9.1-320 pt

5 ♂, 4 ♀ *Amblyomma gemma*

ex. Oxen

Voi (03°23'S, 28°34'E), Kenya

30.IV.1910

Robin Kemp

K14 1912.10.31.18-20

1 ♂, 3 ♀ *Amblyomma humerale*
ex. donkey (*Equus asinus*)

Locality unknown

K15 None

4 ♂ *Amblyomma humerale*

ex. turtle

Guyana

K16 None

1 ♂ *Amblyomma incisum*

ex. tapir (*Tapirus* sp.)

Guyana

Note: There is 1 ♀ in this collection which is tentatively being called *A. incisum* but which has a 3/3 hypostome.

K17 1912.6.21.338

1 ♂ *Amblyomma longirostre*

ex. *Galera barbara* (*Eira barbara*)

Mar de Espanha (21°52'S, 43°00'W), Minas Gerais, Brazil

Z. F. Zikan

K18 1912.6.21.339-343

2 ♂, 3 ♀ *Amblyomma longirostre*

ex. *Synethes prehensilis* (*Coendou prehensilis*)

Mar de Espanha (21°52'S, 43°00'W), Minas Gerais, Brazil

6.III.1911

Z. F. Zikan

K19 1912.10.31.13

1 ♂ *Amblyomma maculatum*

ex. *Canis* sp.

Buenos Aires (34°36'S, 58°27'W), Argentina

30.VI.1912

Miss Idina G. Runnael

K20 1912.12.4.12-14

1 ♂, 1 ♀ *Amblyomma maculatum*

ex. Small Chubut Fox

Bahia Blanca (38°43'S, 62°17'W), Argentina

15.II.1911

E. Weiske

K21 1919.8.14.1-70 pt

4 ♂, 5 ♀ *Amblyomma maculatum*

ex. *Blastocerus dichotomus* (*B. bezoarcticus*)

Parana Delta (vicinity of 33°43'S, 59°15'W), Argentina

25.II.1917

Robin Kemp

K22 None

3 ♂ *Amblyomma maculatum*

ex. *Pseudalopex gymnocerus* (*Dusicyon gymnocerus*)

Laguna Alsina (36°49'S, 62°13'W), to Buenos Aires (34°36'S, 58°27'W), Argentina

V.1916

Robin Kemp

K23 1919.8.14.1-70 pt

Amblyomma mantiquirens (1 ♂ *Amblyomma naponense*)

ex. *Hydrochaeris hydrochaeris*

Eastern Ecuador

This collection also contains 1 ♀ of *Amblyomma ovale* or a closely related species.

K24 None

1 ♂, 1 ♀ *Amblyomma nodosum*

ex. Anteater

Colombia, S. America

1912

K25 1912.6.21.325

1 ♂, 3 N, 3 L *Amblyomma nodosum*

ex. *Myrmecophaga tetradactyla* (*Myrmecophaga tridactyla*)

Misantla (19°56'N, 96°50'W), Mexico

I.1911

W. Engelmann

Note: Immature specimens tentatively this sp.

K26 1912.6.21.344-352

8 ♂, 4 ♀, 3 N *Amblyomma ovale*

ex. *Nasua socialis* (*Nasua nasua*)

Mar de Espanha (21°52'S, 43°00'W), Estado de Minas Gerais, Brazil

15.X.1910

Z. F. Zikan

Note: Also present were 1 ♂, 2 ♀ of the mallophagan *Neotrichodectes pallidus*

K27 1912.6.21.353-358

7 ♂, 3 ♀ *Amblyomma ovale*

ex. *Galera barbara* (*Eira barbara*)

Mar de Espanha (20°52'W, 43°00'W), Minas Gerais, Brazil

Z. F. Zikan

K28 1921.12.9.10-11

1 ♂, 1 ♀ *Amblyomma ovale*

ex. *Galictes vittata* (*Grisson vittata*)

9.VIII.1916

W. Ehrhardt

K29 1921.12.9.12-20

8 ♂, 2 ♀ *Amblyomma ovale*

ex. *Nasua familiaris* (*Nasua nasua*)

Joinville (26°18'S, 48°50'W), Humboldt, Estado de Santa Catharina, Brazil

5.VIII.1918

W. Ehrhardt

K30 None

3 ♂, 2 ♀ *Amblyomma ovale*

ex. *Procyon cancrivorus*

Joinville (26°18'S, 48°50'W), Humboldt, Estado de Santa Catharina, Brazil

24.VII.1912

W. Ehrhardt

- K31 None
1 ♂ *Amblyomma ovale*
ex. *Nasua socialis* (*Nasua nasua*)
Mar de Espanha (21°52'S, 43°00'W), Estado de Minas Gerais, Brazil
18.VIII.1911
Z. F. Zikan
- K32 None
12 ♂, 5 ♀ *Amblyomma ovale*
ex. *Nasua socialis* (*Nasua nasua*)
Mar de Espanha (21°52'S, 43°00'W), Estado de Minas Gerais, Brazil
18.VIII.1911
Z. F. Zikan
- K33 1912.6.21.319–324
Amblyomma albolimbatus (2 ♀ *Amblyomma postoculatum*; 5 ♀ *Haemaphysalis lagostrophii*)
ex. *Lagostrophus fasciatus*
Bernier Island (24°52'S, 113°08'E), W. Australia
1910
B. H. Woodward
- K34 None
Amblyomma concolor (2 ♂, 7 N, 3 L *Amblyomma pseudoconcolor*)
ex. Armadillo
La Rioja (29°26'S, 66°15'W), Argentina
E. Giacomelli
- K35 1912.12.4.15–16
2 ♂ *Amblyomma testudinarium*
ex. Sheep
Sri Lanka
- K36 None
1 N *Amblyomma variegatum*
ex. Raven
Harar (09°19'N, 42°09'E), Ethiopia
17.II.1912
G. Kristensen
Amblyomma variegatum is a vector of the viruses Dugbe, Thogoto, Jos, Crimean Congo hemorrhagic fever, Nairobi sheep disease, Bhanja and Somone.
- K37 None
1 ♂ *Amblyomma variegatum*
Host unknown
Harar (09°19'N, 42°09'E), Ethiopia
9.II.1912
G. Kristensen
- K38 None
1 N *Amblyomma* sp.
ex. *Canis familiaris*
Harar (09°19'N, 42°09'E), Ethiopia
4.XII.1911
G. Kristensen
- K39 None
2 N *Amblyomma* sp.
ex. *Homo sapiens*
Gola National Forest (06°56'N, 10°45'W), Liberia
26.V.1910
R. H. Bunting
- K40 1912.6.21.370–380
Amblyomma concolor (3 ♀, 23 N *Aponomma concolor*)
ex. *Echidna aculeata* (*Tachyglossus aculeatus*)
Gippsland District (38°00'S, 147°00'E), Australia
12.IX.1910
A. Coles
- K41 None
Amblyomma concolor (11 N *Aponomma concolor*)
ex. *Echidna* sp. (*Tachyglossus aculeatus*)
Australia
A. Coles
- K42 1912.6.21.381–383
Amblyomma concolor (3 ♀, 3 N *Aponomma concolor*)
ex. *Echidna aculeata* (*Tachyglossus aculeatus*)
Traralgon (38°12'S, 146°32'E), Australia
29.X.1910
A. Coles
- K43 1912.6.21.384–386
Amblyomma concolor (3 ♀ *Aponomma concolor*)
ex. *Echidna* sp. (*Tachyglossus aculeatus*)
Australia
27.II.1911
A. Coles coll.
- K44 None
Aponomma decorosum (Species epithet crossed out and *undatum* inserted) (22 ♂, 3 ♀, 3 N *Aponomma decorosum*)
Ex. *Varanus* sp.
Kelsey Creek (20°26'S, 148°27'E), Queensland, Australia
1911
A. Fontaine
- K45 1912.6.21.391–401
Aponomma decorosum (Species epithet crossed out and *undatum* inserted) (22 ♂, 6 ♀, 18 N, 2 L *Aponomma decorosum*)
ex. Brown Iguana (*Varanus* sp.)
Kelsey Creek (20°26'S, 148°27'E), Queensland, Australia
A. Fontaine
Publication: Kaufman (1972: 369)
- K46 1912.6.21.402–410
Aponomma decorosum (Species epithet crossed out and *undatum* inserted) (15 ♂, 13 ♀, 21 N, 2 L *Aponomma decorosum*)
ex. Black Iguana (*Varanus* sp.)
Kelsey Creek (20°26'S, 148°27'E), Queensland, Australia

- A. Fontaine
Publication: Kaufman (1972: 369)
K47 None
Aponomma decorosum (Species epithet crossed out and *undatum* inserted) (1 ♂, 1 ♀, 4 N *Aponomma decorosum*)
ex. Iguana (*Varanus* sp.)
Australia
11.I.1911
Publication: Kaufman (1972: 370)
K48 1912.10.31.21–25
2 ♂ *Aponomma exornatum*
ex. Egyptian monitor (*Varanus* sp.)
Bibianiha [Bebaianiha (05°43'N, 00°27'W) or other populated place of this name nearby], Ghana
17.XII.1911
H. G. F. Spurrell
K49 1912.6.21.387–390
Aponomma ecinctum (2 ♂, 2 ♀ *Aponomma fimbriatum*)
ex. Tiger snake (*Notechis scutatus*)
Melbourne (37°49'S, 144°58'E), Australia
12.VII.1911
A. Coles
Note: Very poor specimens; hypostomes lacking in all specimens. Capitulum present in only one ♀ but from porose areas and scutal configuration of ♀ and scutum and tarsi of ♂ these appear to be good *A. fimbriatum*.
K50 1912.6.21.416
1 ♂ *Aponomma latum*
ex. *Hystrix* sp.
Mduna River, Hlabisa District, (28°10'S, 32°10'E), Zululand Region, Republic of South Africa
9.III.1910
F. Toppin
Received from Natal Museum, Pietermaritzberg
H. Hoogstraal det. 1952 'unusual host'
K51 1912.6.21.359–369
Aponomma gervaisi var. *trimaculatus* (11 ♂, 2 ♀, 1 N *Aponomma trimaculatum*)
ex. *Python* sp.
Sattelberg, Huon Gulf (07°10'S, 147°25'E), Papua New Guinea
1911
Prof. F. Forster
K52 None
2 ♀ *Boophilus decoloratus*
Host unknown
Tanzania
Dr E. J. Baxter
Boophilus decoloratus is a vector of the viruses Dugbe, Thogoto, Bhanja, Jos, Somone and Crimean Congo hemorrhagic fever.
K53 1912.10.31.26–29
Haemaphysalis kochi (1 ♀ *Boophilus microplis*; 2 ♂, 1 ♀, 1 N *Haemaphysalis juxtakochi*)
ex. Deer
Caparo (10°27'N, 61°20'W), Trinidad Island, Trinidad and Tobago
22.V.1912
S. M. Klages
K54 1912.12.4.17
1 ♂ *Dermacentor atrosignatus* group
ex. Sheep
Sri Lanka
K55 None
Dermacentor reticulatus var. *aulicus* SYNTYPE (1 ♀ *Dermacentor reticulatus*)
Host unknown
Valescure, nr. St. Raphael (43°26'N, 06°46'E), France
2.IV.1910
Publication: Hirst (1916: 308) original description.
K56 1912.6.21.77–97
2 ♂, 8 ♀ *Dermacentor reticulatus*
ex. *Canis familiaris*
Kuybyshev (55°40'N, 78°12'E), Tomsk, U.S.S.R.
27.VIII.1911
W. M. Thomas
K57 1912.6.21.69–71
1 ♀ *Haemaphysalis bancrofti*
ex. Horse *Equus caballus*
Kelsey Creek (20°26'S, 148°27'E), Queensland, Australia
1911
A. Fontaine
K58 1912.6.21.76
1 ♂ *Haemaphysalis bancrofti*
ex. Black Wallaby [*Macropus dorsalis*, the black-striped wallaby or *Wallabia bicolor*, the black, or black-tailed wallaby, both of which occur in Queensland].
Kelsey Creek (20°26'S, 148°27'E), Queensland, Australia
1911
A. Fontaine
K59 None
2 ♂ *Haemaphysalis bancrofti*
ex. Wallaby (*Wallabia* sp. or *Macropus* sp.)
Kelsey Creek (20°26'S, 148°27'E), Queensland, Australia
1911
A. Fontaine
K60 None
2 ♂ *Haemaphysalis bancrofti*
ex. *Canis familiaris*

Kelsey Creek (20°26'S, 148°27'E), Queensland,
Australia
1911
A. Fontaine

K61 None
2 ♂ *Haemaphysalis calcarata*
Host unknown
Voi (03°23'S, 38°34'E), Kenya
14.IV.1910
Robin Kemp

K62 None
Haemaphysalis leachi leachi (2 ♂, 2 ♀ *Haemaphysalis leachi*)
Host unknown
Tanzania
Dr E. J. Baxter

K63 1912.10.31.30-35
Haemaphysalis leachi leachi (9 ♂, 2 ♀ *Haemaphysalis leachi*)
ex. *Felis* sp.
Lake Suai, Ethiopia (locality not verified)
[Hirst original det. *Haemaphysalis* sp.]

K64 1912.6.21.33-35
2 ♂, 2 ♀ *Haemaphysalis leachi*
ex. *Hyaena* (*Hyaena hyaena*)
Harar (09°19'N, 42°09'E), Ethiopia
31.XII.1911
G. Kristensen

K65 1912.6.21.36-44
10 ♂, 8 ♀ *Haemaphysalis leachi*
ex. *Felis catus*
Harar (09°19'N, 42°09'E), Ethiopia
22.I.1912
G. Kristensen

K66 1912.6.21.45-49
5 ♂ *Haemaphysalis leachi*
ex. Marten
Harar (09°19'N, 42°09'E), Ethiopia
18.I.1912
G. Kristensen

K67 1912.6.21.50-55
5 ♂, 3 ♀ *Haemaphysalis leachi*
ex. 'Badlington' dog
Gola National Forest (06°56'N, 10°45'W), Liberia
17.VI.1910
R. H. Bunting

K68 1912.6.21.56-58
1 ♂, 2 ♀ *Haemaphysalis leachi*
ex. *Felis serval*
Mpwapa (06°21'S, 36°29'E), Tanzania
15.X.1911
Marschner. Rec'd. from W. Fasius

K69 None
Haemaphysalis leachi (4 ♂ *Haemaphysalis leachi*;
2 ♀ *Ixodes thomae*)
Host unknown
Rombo, Kilimanjaro (03°05'S, 37°20'E),
Tanzania
7.VI.1910
Robin Kemp

K70 None
7 ♂, 10 ♀ *Haemaphysalis leachi*
Host unknown
Rombo, Kilimanjaro (03°05'S, 37°20'E),
Tanzania
6.VI.1910
Robin Kemp

K71 None
4 ♂, 4 ♀ *Haemaphysalis leachi*
Host unknown
Rombo, Kilimanjaro (03°05'S, 37°20'E),
Tanzania
8.VI.1910
Robin Kemp

K72 None
2 ♂ *Haemaphysalis leachi*
ex. Domestic Rabbit (*Oryctolagus* sp. probably.)
The genus *Oryctolagus* does not exist south of
the Sahara unless bred in captivity.
Rombo, Kilimanjaro (03°05'S, 37°20'E),
Tanzania
20.VI.1910
Robin Kemp

K73 None
11 ♂, 8 ♀, 1 N *Haemaphysalis leachi*
Host unknown
Rombo, Kilimanjaro (03°05'S, 37°20'E),
Tanzania
11.VI.1910
Robin Kemp

K74 None
25 ♂, 11 ♀ *Haemaphysalis leachi*
Host unknown
Rombo, Kilimanjaro (03°05'S, 37°20'E),
Tanzania
9.VI.1910
Robin Kemp

K75 None
1 ♂ *Haemaphysalis leachi*
ex. *Genetta stuhlmanni*
Fennek, Mutoragwa
Aberdare Mts, Kenya (locality not verified*)
23.III.1910
Robin Kemp

*There is a Mutarakwa Hill (00°47'S, 35°14'E) in
the Aberdares that is a possible locality for this
collection.

K76 1912.6.21.59–65

Haemaphysalis leachi? (7 ♂, 4 ♀ *Haemaphysalis leachi* group)

ex. *Paradoxurus niger* (*Paradoxurus hermaphroditus*)

Hoshangabad District (22°35'N, 77°40'E), India
1912

C. A. Crump

Received from Bombay Nat. Hist. Soc.

K77 1914.11.17.16–35

Haemaphysalis spinigera var. *novae-guineae*
TYPE (19 ♂, 4 ♀, 1 N *Haemaphysalis novae-guineae* paralectotypes)

ex. Kangaroo

Sattelberg, Huon Gulf (07°10'S, 147°25'E), Papua
New Guinea

1911

Prof. F. Forster

Publications: Hirst (1914: 328), original description; Nuttall & Warburton (1915: 452); Roberts (1963: 57)

K78 1914.11.17.1–15

Haemaphysalis spinigera var. *novae-guineae*
TYPE (1 ♂ *Haemaphysalis novaeguineae* lectotype; 9 ♂, 11 ♀ *Haemaphysalis novaeguineae* paralectotypes)

ex. *Perameles* sp. ?

Sattelberg, Huon Gulf (07°10'S, 147°25'E), Papua
New Guinea

Prof. F. Forster

Publications: Hirst (1914: 328) original description; Nuttall & Warburton (1915: 452); Roberts (1963: 57) selected lectotype and paralectotypes.

K79 1914.11.17.36–46

Haemaphysalis spinigera var. *novae-guineae*
TYPE (6 ♂, 10 ♀, 1 N *Haemaphysalis novae-guineae* paralectotypes)

ex. *Hydromys* sp.

Sattelberg, Huon Gulf (07°10'S, 147°25'E), Papua
New Guinea

1911

Prof. F. Forster

Publications: Hirst (1914: 328), original description; Nuttall & Warburton (1915: 452); Roberts (1963: 57) designated paralectotypes.

K80 1912.6.21.66

1 ♂ *Haemaphysalis parmata*

ex. *Neotragus pygmaeus*

Bebianiha (05°43'N, 00°27'W) or other
populated places of this name nearby, Ghana

10.XI.1911

H. G. F. Spurrell

K81 None

13 N *Haemaphysalis spinigera*

ex. *Lepus* sp.

Hoshangabad District (22°35'S, 77°40'E), India
1912

C. A. Crump

Received from Bombay Nat. Hist. Soc.

Haemaphysalis spinigera is a vector of the viruses
Kaisodi and Kyasanur forest disease.

K82 1912.10.31.36–46

Haemaphysalis sp. (28 ♂, 7 ♀ *Haemaphysalis spinulosa*)

ex. Wild cat

Harar (09°19'N, 42°09'E), Ethiopia

6.II.1912

G. Kristensen

K83 None

Haemaphysalis leachi? (1 ♀ *Haemaphysalis spinulosa*)

ex. *Canis familiaris*

Himo River (03°33'S, 37°30'E), Tanzania

30.V.1910

Robin Kemp

K84 1912.6.21.22–32 pt

Haemaphysalis cinnabarina var. *punctata* (2 ♂, 3 ♀ *Haemaphysalis sulcata*)

ex. Sheep

Larnaca (34°55'N, 33°38'E), Cyprus

XI.1911

C. B. Horsbrugh

K85 1912.6.21.22–32 pt

2 ♂, 3 ♀ *Haemaphysalis sulcata*

ex. Sheep

Larnaca (34°55'N, 33°38'E), Cyprus

XI.1911

C. B. Horsbrugh

Note: A portion of this collection was originally
entered under *Haemaphysalis cinnabarina* var.
punctata.

K86 None

Haemaphysalis warburtoni? (1 ♂, 2 ♀, 2 N
Haemaphysalis tibetensis TYPES

1 ♂ (holotype) 2 ♀, 2 N (paratypes)

ex. *Canis familiaris*

Yatung (27°25'N, 89°00'E) (ca. 3896 m) mouth of
Chumbi Valley, Tibet

D. Macdonald

Publication: Hoogstraal (1965: 452), original
description.

K87 1912.6.21.247–250

Hyalomma syriacum (3 ♂, 1 ♀ *Hyalomma aegyptium*)

ex. *Testudo graeca iberica*

Hammam Rirha (36°26'N, 02°28'E), Algeria

24.V.1911

Hon. Walter Rothschild & Ernst Hartert

K88 1912.6.21.251–253

Hyalomma syriacum (Species epithet crossed out and *aegyptium* inserted) (4 ♀ *Hyalomma anatolicum excavatum*)

Host unknown

North West Morocco

Received from Hon. W. Rothschild

K89 1912.6.21.240–6

Hyalomma aegyptium (2 ♂, 1 ♀ *Hyalomma marginatum*)

Host unknown

Hammam Rirha (36°26'N, 02°28'E), Algeria

1911

C. Hilgert

Hyalomma marginatum is a vector of the viruses Dhori, West Nile, tickborne encephalitis, Bhanja, Crimean Congo hemorrhagic fever, Tamdy and Batken.

K90 1911.12.9.1–320 (pt)

Hyalomma aegyptium (2 ♀ *Hyalomma truncatum*)

ex. Aged donkey (*Equus asinus*)

Voi (03°23'S, 38°34'E), Kenya

29.IV.1910

Robin Kemp

K91 None

8 N *Hyalomma* sp.

Host unknown

Biskra (34°50'N, 05°40'E), Algeria

25.III.1909

Hon. L. W. Rothschild

K92 1919.8.14.1–70 (part)

3 N *Hyalomma* sp.

ex.? *Dipodillus* (gerbil) (*Gerbillus* (*Dipodillus*) sp.) ('host similar to 108')

Guellet-es-Stel (35°09'N, 03°02'E), Algeria

IV.1912

Hon. Walter Rothschild and Karl Jordan

K93 1912.6.21.202

Rhipicephalus sp. (4 N *Hyalomma* sp.; 1 ♀ *Rhipicephalus pulchellus*; 10 N *Rhipicephalus* sp.)

ex. *Lepus* sp.

Harar (09°19'N, 42°09'E), Ethiopia

9.I.1912

G. Kristensen

Rhipicephalus pulchellus is a vector of the viruses Dugbe, Crimean Congo hemorrhagic fever, and Nairobi sheep disease.

K94 None

Ixodes var. of *fecialis* (2 ♀ *Ixodes alluaudi*)ex. *Lophuromys flavopunctatus zena*

Aberdare Mts (00°25'S, 36°38'E), Kenya

14.II.1910

Robin Kemp

K95 None

Ixodes var. of *fecialis* (1 ♀ *Ixodes alluaudi*)ex. *Lophuromys flavopunctatus zena*

Aberdare Mts (00°25'S, 36°38'E), Kenya 11,000 ft (3,353 m)

21.II.1910

Robin Kemp

K96 None

Ixodes tenuirostris (2 ♀ *Ixodes alluaudi*)ex. *Otomys tropicalis elgonis*

Mt Ilkinangop (00°38'S, 36°42'E), Aberdare Mts, Kenya

24.II.1910

Robin Kemp

K97 None

Ixodes tenuirostris (1 ♀ *Ixodes alluaudi*)

Host unknown

Rombo, Kilimanjaro (03°05'S, 37°20'E), Tanzania

15.IV.1910

Robin Kemp

Note: This ♀ has been previously pinned.

K98 None

[undetermined genus & species] (1 N *Ixodes alluaudi*)ex. *Mus jacksoni* (Possibly *Anomalurus derbianus jacksoni*)

Mutaragwa, Aberdare Mts (locality not verified*), Kenya

13.III.1910

R. Kemp

*There is a Mutarakua Hill (00°47'S, 35°14'E) in the Aberdares that is a possible locality for this collection.

K99 1912.6.21.280–2

4 ♀ *Ixodes cordifer*ex. *Pseudoiricornia* (probably *Pseudocheirus* sp.)

Sattelberg, Huon Gulf (07°10'S, 147°25'E), Papua New Guinea

1911

Prof. F. Forster

K100 1912.6.21.283

1 ♀ *Ixodes cordifer*ex. *Dactylopsida trivirgata*

Sattelberg, Huon Gulf (07°10'S, 147°25'E), Papua New Guinea

Prof. F. Forster

Note: label in vial—seen by Prof. R. A. Cooley 1946. 3 slides of dissections (RML 22285).

K101 1912.6.21.284–8

4 ♀ *Ixodes cordifer*ex. *Phalanger maculatus*

Sattelberg, Huon Gulf (07°10'S, 147°25'E), Papua New Guinea

1911

Prof. F. Forster

- K102 1912.6.21.279
1 ♂ *Ixodes cordifer*
ex. *Perameles* sp.
Sattelberg, Huon Gulf (07°10'S, 147°25'E), Papua
New Guinea
1911
Prof. F. Forster
- K103 1912.12.4.11
1 ♀, 4 N *Ixodes feicalis*
ex. *Felis* sp.
Studley Park, Melbourne (37°49'S, 144°58'E),
Australia
19.V.1911
A. Coles
Note: Reverse of the vial label bears the
inscription—Native cat.
- K104 1912.6.21.254—6
5 ♀, 2 N *Ixodes hexagonus*
ex. *Mustela vulgaris* (*Mustela nivalis*)
Tring (51°47'N, 00°39'W), England
12.III.1912
J. F. Cox
- K105 1912.6.21.259—61
1 ♀, 2 N, 7 L *Ixodes hexagonus* (1 ♀, 2 N *Ixodes*
hexagonus)
ex. *Mustela erminea*
Tring (51°47'N, 00°39'W), England
III.1912
J. F. Cox
- K106 1912.6.21.262—3
4 N *Ixodes hexagonus* (4 N, 8 L *Ixodes*
hexagonus)
ex. *Meles taxus* (*Meles meles*)
Senj (45°00'N, 14°54'E), Yugoslavia
5.XII.1911
F. Dobiasch
- K107 None
22 N, 6 L *Ixodes hexagonus*
ex. *Mustela erminea*
Loch Tay (56°28'N, 04°18'W), Lawes, Scotland
2.III.1911
L. G. Esson
- K108 None
1 ♀ *Ixodes hexagonus*
Host unknown
Faugères*, S. France
8.X.1913
W. Davy
N. C. Rothschild
*Three possible localities for Faugères, France:
43°34'N, 03°11'E; 44°28'N, 03°58'E; 44°58'N,
04°35'E.
- K109 None
2 N *Ixodes hexagonus*
ex. *Mustela putorius*
- Carmarthen (51°52'N, 04°18'W), Wales
1914
F. W. Frohawk
- K110 1919.8.14.1—70 (part)
1 ♀ *Ixodes hexagonus*
ex. dog *Canis familiaris*
Bridgnorth (52°32'N, 02°25'W), England
28.X.1916
Miss Frances Pitt
- K111 1912.12.4.9—10
1 ♂, 1 ♀ *Ixodes loricatus*
ex. *Didelphis marsupialis aurita*
Mar de Espanha (20°52'S, 43°00'W), Estado de
Minas Gerais, Brazil
6.X.1910
Z. F. Zikan
- K112 1919.8.14.1—70 pt
2 ♂, 5 ♀ *Ixodes loricatus*
ex. *Lutreolina crassicaudata*
Parana Delta (vicinity of 33°43'S, 59°15'W),
Argentina
X.1916
Robin Kemp
- K113 1912.6.21.289—292
Ixodes loricatus var. *spinosus* (4 ♂ *Ixodes luciae*)
ex. *Didelphis marsupialis*
San Esteban (11°28'N, 69°22'W), Venezuela
31.I.1911
- K114 None
4 ♀, 15 N, 1 L *Ixodes ornithorhynchi*
ex. *Ornithorhynchus paradoxus* (*Ornithor-*
hynchus anatinus)
Tyalgum Tereed River, perhaps Tyalgum Creek
(28°22'S, 153°13'E), New South Wales,
Australia
IX.1912
Received from W. F. H. Rosenberg
- K115 1912.6.21.272—3
Ixodes rarus (2 ♀ *Ixodes cumulatimpunctatus*)
ex. *Cricetomys gambianus*
Bibianiha (05°43'N, 00°27'W) or other populated
places of this name nearby, Ghana
23.XII.1911
H. G. F. Spurrell
- K116 1912.6.21.264
3 ♀ *Ixodes ricinus* (2 ♀ *Ixodes ricinus*)
ex. *Canis familiaris*
Porlock Weir (51°12'N, 03°40'W), England
27.IV.1912
F. J. Cox
Ixodes ricinus is a vector of the viruses Tettang,
Tribec, Louping ill, tickborne encephalitis, West
Nile, Crimean Congo hemorrhagic fever,
Lipovnic, Uukuniemi, Sumakh, Eyack and
Kharagysh.

K117 None

Ixodes tasmani? (2 ♂, 1 ♀, 1 N *Ixodes tasmani*)ex. Nest of *Pseudochirus cooki* (*Pseudocheirus peregrinus*)

N. W. Coast, Tasmania, Australia

IX.1912

R. N. Atkinson

K118 1912.10.31.7-10

Ixodes tenuirostris (1 ♂, 2 ♀, 3 N *Ixodes trianguliceps*)ex. *Microtus glareolus* (*Clethrionomys glareolus*)

Braunton (51°06'N, 04°11'W), England

21.VI.1912

W. Holland

K119 1912.6.21.267

1 N *Ixodes vespertilionis*ex. *Rhinolophus ferrumequinum*

Cave de Meunes, Southern France (locality not verified)

20.I.1908

Dr K. Jordan

K120 1912.6.21.268-9

4 N, 1 L *Ixodes vespertilionis*

ex. Bat?

Monchique (37°20'N, 08°29'W), Portugal

12.V.1910

Dr K. Jordan

K121 1912.10.31.11

1 ♀ *Ixodes vespertilionis*ex. *Rhinolophus ferrumequinum*

Braunton (51°06'N, 04°11'W), England

22.V.1912

W. Holland

N. C. Rothschild

Note: This ♀ is in alcohol but there is a pin through the idiosoma.

K122 1912.6.21.266

2 N *Ixodes vespertilionis*ex. *Rhinolophus ferrumequinum*

St Genes de Malgoires (Saint-Genies-de-Malgoires) (43°57'N, 04°13'E), France

IV.1910

Albert Hugues

K123 None

1 N *Ixodes vespertilionis*

ex. bat

Oumasch, Algeria (locality not verified)

5.III.1911

Hon. Walter Rothschild & Ernst Hartert

Note: Theodor (1967: 94) cited a collection of 2 ♂, 3 ♀ *Nycteribia schmidlii schmidlii* off *Plecotus auritus christiei*, Oumasch near Biskra, Algeria, 5.III.1911, Hon. W. Rothschild and E. Hartert. Quite probably this bat was host for both species of ectoparasite.

K124 1912.6.21.270

1 ♀ *Ixodes vespertilionis*ex. *Rhinolophus hipposideros*

Uj-Moldova (44°44'N, 21°42'E), Romania

I.V.1910

Lintia Dionisius

K125 None

9 N, 5 L *Rhipicephalus h. haemaphysaloides* (4 N, 2 L *Rhipicephalus haemaphysaloides*)ex. *Lepus* sp.

Hoshangabad (22°46'N, 77°45'W), India

1912

C. A. Crump

Received from Bombay Nat. Hist. Soc.

K126 1912.6.21.203-204

Rhipicephalus kochi (1 ♂ *Rhipicephalus jeanneli*)

ex. grass in tent

Voi (03°23'S, 38°24'E), Kenya

R. Kemp

19.IV.1910

K127 None

Rhipicephalus sp. (3 ♂ *Rhipicephalus kochi*; 1 ♂ *Rhipicephalus longicoxatus*; 6 ♂, 1 ♀ *Rhipicephalus pravus*)ex. Aged donkey (*Equus asinus*)

Voi (03°23'S, 38°34'E), Kenya

29.IV.1910

Robin Kemp

Rhipicephalus pravus is a vector of Kadam virus.

K128 1912.6.21.239

Rhipicephalus sp. (1 ♀ *Rhipicephalus kochi* group)

ex. Ox

Curepipe (20°19'S, 57°31'E), Mauritius

3.XI.1911

C. Brishoe

Note: Tentative identification: Engorged misshapen specimen.

K129 None

1 ♂, 1 ♀, 10 N *Rhipicephalus pravus*

Host unknown

Taveta (03°25'S, 37°43'E), Kenya

27.V.1910

Robin Kemp

K130 1953.10.9.17

1 ♂ *Rhipicephalus pravus* (1 ♂, 1 N *Rhipicephalus pravus*)ex. Jerboa? (*Jaculus* sp.?)

Voi (03°23'S, 38°34'E), Kenya

22.IV.1910

Robin Kemp

K131 1911.12.9.1-320 (part)

Rhipicephalus sp. (25 ♂, 27 ♀ *Rhipicephalus pravus*)

Host unknown

- Rombo, Kilimanjaro (03°05'S, 37°20'E), ex. *Lepus* sp.
Tanzania
15.VI.1910 Mountains near Drah (34°52'N, 05°53'E), Algeria
Robin Kemp 8.III.1911
Hon. Walter Rothschild & Ernst Hartert
- K132 1912.6.21.229
1 ♂, 1 ♀ *Rhipicephalus pulchellus*
ex. *Homo sapiens* off ground in tent
Nairobi (01°17'S, 36°49'E), Kenya
25.IV.1910
Robin Kemp
- K133 1919.8.14.1-70 pt
Rhipicephalus simus (1 ♂, 1 ♀ *Rhipicephalus sanguineus*)
ex. *Vulpes vulgaris* (*Vulpes vulpes*)
Toscana (43°25'N, 11°00'E), Italy
1917
N. Cimballi
Rhipicephalus sanguineus is a vector of Wad Medani virus and the rickettsia of boutonneuse fever.
- K134 1919.8.14.1-70 pt
Rhipicephalus simus (1 ♀ *Rhipicephalus sanguineus*)
Host unknown
Firenze (43°46'N, 11°15'E), Italy
N. Cimballi
- K135 1912.12.4.18
Rhipicentor (1 ♀ *Rhipicephalus sanguineus*)
ex. dog (*Canis familiaris*)
Livingstone (12°20'S, 30°18'E), Zambia
1912
A. Douglas
- K136 1912.6.21.231-232
2 ♀ *Rhipicephalus sanguineus*
ex. *Canis familiaris*
Dehra Dun (30°19'N, 78°04'W), India
1910
Mrs R. Parson
- K137 1912.6.21.234-38
6 ♂, 14 ♀ 1 N *Rhipicephalus sanguineus*
ex. *Canis familiaris*
Manaus (03°10'S, 60°00'W), Brazil
1911
Rev. A. Miles Moss
- K138 None
Rhipicephalus sp. (1 ♀ *Rhipicephalus sanguineus*)
ex. *Gerbillus indicus* (*Gerbillus* sp.)
Khandala (18°55'N, 73°25'E), India
11.V.1912
J. Assmuth
Note: Tentative identification: Teneral runt female.
- K139 1912.6.21.205-220
Rhipicephalus sp. (17 ♂, 6 ♀ *Rhipicephalus sanguineus*)
- K140 1912.6.21.201
Rhipicephalus sp. (1 ♀ *Rhipicephalus sanguineus*)
ex. *Erinaceus europaeus*
Saint-Genies-de-Malgoires (43°57'N, 04°13'E), France
21.III.1909
A. Hugues
- K141 1919.8.14.1-70 part
Rhipicephalus sp. (2 ♀ *Rhipicephalus sanguineus*)
ex. hedgehog
Hammam Meskoutine (36°27'N, 07°16'E), Algeria
6.V.1914
Hon. Walter Rothschild & Karl Jordan
- K142 1912.6.21.230
Rhipicephalus sp. (1 ♂ *Rhipicephalus simus*)
ex. Vulture
Mduna River, Hlabisa District (28°10'S, 32°10'E), Zululand Region, Republic of South Africa
27.III.1910
F. Toppin
Received from Natal Museum, Pietermaritzberg
Rhipicephalus simus is a vector of the viruses Thogoto and Nairobi sheep disease.
- K143 None
1 ♂, 5 ♀ *Rhipicephalus simus*
Host unknown
Tanzania
Dr E. J. Baxter
- K144 None
1 N *Rhipicephalus* sp.
Host unknown
Biskra (34°50'N, 05°40'E), Algeria
25.III.1909
- K145 None
2 N *Rhipicephalus* sp.
ex. *Elephantulus rufescens*
Voi (03°23'S, 38°34'E), Kenya
18.IV.1910
Robin Kemp
- K146 None
10 N, 2 L *Rhipicephalus* sp.
ex. *Elephantulus rufescens*
Voi (03°23'S, 38°34'E), Kenya
19.IV.1910
Robin Kemp
- K147 None
2 N *Rhipicephalus* sp.
ex. *Elephantulus rufescens*
Voi (03°23'S, 38°34'E), Kenya
25.IV.1910
Robin Kemp

Rothschild specimens missing from British Museum (Natural History) collection

K148 1912.6.21.3–20

Argas persicus

ex. fowls

Larnaca, Cyprus

K149 1911.12.9.1–320 pt

Amblyomma gemma

Host unknown

Kilimanjaro, Brit. E. Africa

K150 1912.6.21.411–415

Aponomma gervaisi var. *trimaculatus*

ex. Iguana

Kelsey Creek, N. Queensland

K151 1919.8.14.1–70 (pt)

Haemaphysalis leachi

ex. Hedgehog

Meskoutine Hamman, Mespot.

K152 1912.10.31.36–46

Haemaphysalis leachi indica

ex. Wildcat

Harar, Abyssinia

K153 1911.12.9.1–320 pt.

Hyalomma truncatum

ex. Donkey

British East Africa

K154 1912.6.21.265

1 ♀ *Ixodes ricinus*

Host unknown

Hamman Rirha, Algeria

K155 1919.8.14.1–70 pt.

*Ixodes vespertilionis*ex. *Vespertilio euryalis*

Algeria

K156 1912.6.21.188–200

*Rhipicephalus sanguineus*ex. *Erinaceus europaeus*

Montchique [= Monchique], Portugal

Locality list for ticks in the Rothschild collection

N = Nuttall, K = British Museum (Natural History) collections. Numbers in parentheses indicate missing collections.

Abyssinia (K152)

Algeria N561, N3537, N3538, N3539, (N3536), K1, K2, K87, K89, K91, K92, K123, K139, K141, K144, (K151), (K154), (K155)

Argentina N588, K19, K20, K21, K22, K34, K112

Australia N546, N547, N550, N552, N553, N556, N567, N569, N633, N642, N643, N645, N646, N650, N669, N1162, N1211, N1212, N1213, N1392, N1393, N1397, (N551), (N571), (N644), K6, K33, K40, K41, K42, K43, K44, K45, K46, K47, K49, K57, K58, K59, K60, K103, K114, K117, (K150)

Belgium N597, (N631)

Bolivia N560, N562, N566

Brazil N641, (N544), K8, K10, K17, K18, K26, K27, K28, K29, K30, K31, K32, K111, K137

British East Africa (K149), (K153)

Canada N1105, N1387, N1390, N1399, N1497, N1498, N1499, N1500, N1501, N1502, N1503, N1504, N3502, (N596), (N1388)

Chile N1389

Christmas Island, N360

Colombia K5, K24

Cyprus K84, K85, (K148)

Ecuador K23

Egypt (N539)

England N580, N593, N598, N599, N600, N601, N602, N603, N604, N605, N607, N610, N611, N618, N621, N622, N623, N652, N1067, N1068, N1152, N1159, N1160, N1163, N3160, (N216), (N217), (N298), (N322), (N324), (N395), (N396), (N509), (N518), (N656), K104, K105, K110, K116, K118, K121

Ethiopia K36, K37, K38, K63, K64, K65, K66, K82, K93

France N523, K55, K108, K119, K122, K140

Galapagos Islands N397

Germany, Democratic Republic of K3

Germany, Federal Republic of N608

Ghana K11, K48, K80, K115

Guyana K15, K16

India N572, N573, N576, N581, N582, N583, N592, N892, (N3158), (N3159), K76, K81, K125, K136, K138

Indonesia N72, N73, N74

Ireland N612, (N630)

Italy K133, K134

Jamaica K9

Japan N579

Kalao Island (N76)

Kalas Island (N93)

Kenya K12, K13, K61, K75, K90, K94, K95, K96, K98, K126, K127, K128, K129, K130, K132, K145, K146, K147

Liberia K39, K67

Louisade Archipelago N1166

Madagascar, Democratic Republic of N670

Malawi N563

Mauritius K127

Mexico N557, N568, N640, N647, N648, N1386, N1394, N1396, K25

Morocco K88

Papua New Guinea K51, K77, K78, K79, K99, K100, K101, K102

Paraguay N1391

Philippine Islands N545

Portugal K120, (K156)

Romania K125

Sardinia N1151

Scotland N667, K107

Senegal N888 (W. Rothschild)

South Africa, Republic of N649, N1167, N1167a, K50, K142

Sri Lanka K35, K54

Switzerland N619, N624, N625, N1069, N1161

Tanzania K52, K62, K68, K69, K70, K71, K72, K73, K74, K83, K97, K131, K143

Tibet K86

Trinidad-Tobago K53

Uganda-Zaire border N559

Unknown N549, N554, N555, N558a, N558b, N564, N565, N570, N574, N575, N575x, N584, N585, N589, N590, N591, N613, N617, N634, N637, N638, N639, N826, N1066, N1153, N1154, N1164, N1395, N1398, N3138, N3330, (N75), (N77), (N78), (N90), (N91), (N92), (N516), (N517), (N548), (N586), (N587), (N595), (N620), (N628), (N629), (N632), (N674), (N3136), (N3139), (N3140), (N3141), (N3157), (N3351), K14

U.S.A. N594, N626, N666, N1399, K4, K7

U.S.S.R. K56

Venezuela K113

Wales N606, N609, (N746), K109

Yugoslavia K106

Zambia K135

Zimbabwe N577, N578

Host list for ticks in the Rothschild collection

Numbers in parentheses indicate missing collections. All information relating to missing collections is taken directly from Nuttall's catalogue or British Museum (Nat. Hist.) collection cards.

- Alces alces* N1497, N1499
Anaconda (N3141)
Anomalurus derbianus jacksoni K98
Anteater K24
Armadillo K34
Arvicola terrestris N662
Ateles geoffroyi geoffroyi N565, N640
Bat N591, K120, K123
Bettongia lesueri N646
Bettongia penicillata N1393
Bird (N397)
Blastoceros bezoarcticus K21
Boa (N548)
Bradypus tridactylus (N544), (N3351)
Camel (N586)
Canis familiaris N572, N573, N576, N579, N645, N892, K9, K38, K56, K60, K83, K86, K110, K116, K135, K136, K137
Canis, sp. K19
Canis vulpes (N217)
Cat (K151)
Cat, black N504
Cat, wild K82
Cattle K9
Cercartetus concinnus N1162
Cervus capreolus (N509)
Chicken K4
Clethrionomys glareolus N619, K118
Coendou bicolor simonsi N560
Coendou prehensilis K18
Columba livia K3
Cricetomys gambianus K115
Dactylopsida trivirgata K100
Damaliscus lunatus N1167, N1167a
Dasyurus geoffroyi N650
Deer K53
Didelphis marsupialis N641, K113
Didelphis marsupialis aurita K111
Didelphis sp. N638, N647, N648, N1391
Diemenia superciliosa (N571)
Diemenia textilis N569, N642
Diomedea salvinii (N516)
Dog, 'Badlington' K67
Donkey (K153)
Duck, wild N617
Dusicyon gymnocerus K22
Echidna sp. N3138
Eira barbara K17, K27
Elephantulus rufescens K145, K146, K147
Equus asinus K14, K90, K127
Equus caballus N582, K57
Erinaceus albiventris (N539)
Erinaceus europaeus N597, N599, N608, (N324), (N631), K139, (K156)
Erethacus rubecula (N396)
Felis catus K65
Felis concolor N637
Felis serval K68
Felis sp. K63, K103
Fowls (K148)
Fox (N632)
Fox, chubut K20
Fratercula arctica N634
Genetta stuhlmanni K75
Gerbillus campestris N3537, N3538, N3539
Gerbillus (Dipodillus) sp. K92
Gerbillus gerbillus N1398
Gerbillus sp. K138
Giraffa camelopardalis N558a, N558b, N888 (W. Rothschild)
Grisson vittata K28
Hedgehog K141, (K151)
Homo sapiens N1498, K9, K39, K132
Hyaena hyaena N575X, N1395, K64
Hydrochoerus hydrochaeris K23
Hydromys sp. K79
Hystrix sp. K50
Ictonyx striatus N577
Iguana (K150)
Isodon macrourus N669
Isodon obesulus N1213
Jaculus sp. K130
Kangaroo N546, N552, N553, (N551), K77
Lagorchestes conspicillatus N1392
*Lagostrophus faciatu*s K33
Lepus sp. K81, K93, K125, K139
Lophuromys flavopunctatus zena K94, K95
Lutra lutra N598, N601
Lutra vulgaris (N216)
Lutreolina crassicaudata K112
Macropus dorsalis K58
Macropus fuliginosus N1397
Macropus sp. N633 (N644)
Manis sp. K11
Manis tricuspis N564
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